
Support for Farmers' Cooperatives

Case Study Report **Structure and Strategy of Wine Cooperatives: Comparing Veneto, Italy, to Castilla-La Mancha, Spain**

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Support for Farmers' Cooperatives
Case Study Report
***Structure and Strategy of Wine
Cooperatives: Comparing Veneto, Italy,
to Castilla-La Mancha, Spain***

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Preface and acknowledgements

In order to foster the competitiveness of the food supply chain, the European Commission is committed to promote and facilitate the restructuring and consolidation of the agricultural sector by encouraging the creation of voluntary agricultural producer organisations. To support the policy making process DG Agriculture and Rural Development has launched a large study, “Support for Farmers’ Cooperatives (SFC)”, in order to provide insights on successful cooperatives and producer organisations as well as on effective support measures for these organisations. These insights can be used by farmers themselves, in setting up and strengthening their collective organisation, by the European Commission, and by national and regional authorities in their effort to encourage and support the creation of agricultural producer organisations in the EU.

Within the framework of the SFC project, this case study report on the structure and strategies of wine cooperatives in Veneto, Italy, and Castilla-La Mancha, Spain, has been written.

Data collection for this report has been done in the spring of 2012.

In addition to this report, the SFC project has delivered 33 other case study reports, 27 country reports, 8 sector reports, a report on cluster analysis, a report on the development of agricultural cooperatives in other OECD countries, and a final report.

The authors would like to acknowledge the help and support of the managers and board members of the interviewed cooperatives in Veneto and Castilla-La Mancha.

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1. Introduction

1.1 Objective and research questions

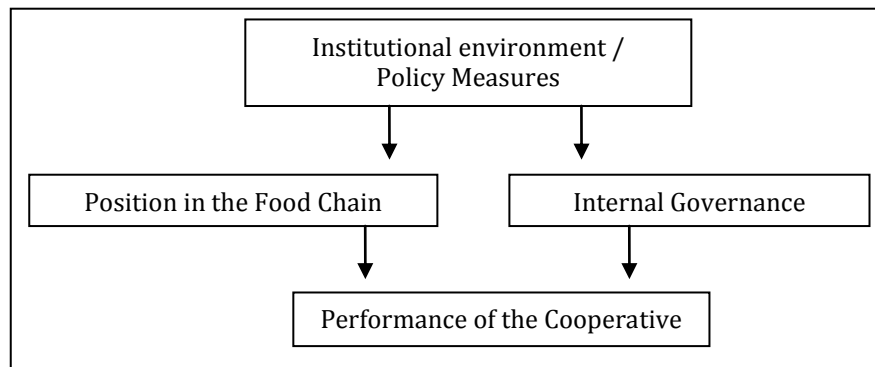
The imbalances in bargaining power between the contracting parties in the food supply chain have drawn much attention, also from policy makers. The European Commission is committed to facilitate the restructuring of the sector by encouraging the creation of voluntary agricultural producer organisations. DG Agriculture and Rural Development has launched a large study, “Support for Farmers' Cooperatives”, that will provide the background knowledge that will help farmers organise themselves in cooperatives as a tool to consolidate their market orientation and so generate a solid market income. In the framework of this study, this report focuses on the interaction between cooperative structure and the strategies adopted by selected wine cooperatives in Veneto, Italy, and Castilla-La Mancha, Spain. These two regions are significant wine producers. The wine cooperatives based in these two regions were chosen due to their structural, ownership, and governance characteristics, as well as their diverse marketing strategies, which enable us to address a number of key issues.

The central issue addressed is whether structure (e.g., first versus second tier cooperatives, collaboration between cooperatives or between cooperatives and IOFs in the sector, etc.) has had a significant impact on the strategy adopted by the case cooperatives and, consequently, their success/failure and the coordination of the wine supply chain. Particularly, research for this comparative case study has been guided by the following research questions. First, how does farmer-led forward integration affect cooperative's ability to provide their members with significant benefits? Second, does the achievement of social objectives constrain cooperatives' ability to excel in terms of economic performance and thus survive in the long run? Third, how successful are federated structures in achieving the goals of their members? Fourth, should public policies treat different types of cooperatives differently based on their ability to increase/stabilise farmers' income? Fifth, should public policies facilitate cooperatives in achieving a balance between economic and social goals and, if yes, in which ways? Sixth, which public support measures (local, regional, national and/or European) have an impact on the development and success/failure of the case cooperatives?

1.2 Analytical framework

There are at least three main factors that determine the success of cooperatives in current food chains. These factors relate to (a) position in the food supply chain, (b) internal governance, and (c) the institutional environment. The position of the cooperative in the food supply chain refers to the competitiveness of the cooperative vis-à-vis its customers, such as processors, wholesalers and retailers. The internal governance refers to its decision-making processes, the role of the different governing bodies, and the allocation of control rights to the management (and the agency problems that goes with delegation of decision rights). The institutional environment refers to the social, cultural, political and legal context in which the cooperative is operating, and which may have a supporting or constraining effect on the performance of the cooperative. Those three factors constitute the three building blocks of the analytical framework applied in this study (Figure 1).

Figure 1. The core concepts of the study and their interrelatedness



1.3 Method of data collection

The case study is based on multiple data sources. First of all, secondary data was used such as academic literature, country reports of the Support for Farmers' Cooperatives project, popular press and electronic media, various archives and other sources of information.

Additional information has been collected through personal interviews with various cooperative stakeholders. For this particular study, board members and managers of cooperatives from Veneto, Italy, and Castilla-La Mancha, Spain, have been interviewed, as well as other key stakeholders. Standard techniques and approaches used in case study research were used in order to maximise reliability and avoid biases.

1.4 Structure of the report

Chapters 2 and 3 of this report are aimed to provide a full picture of respectively the Veneto and Castilla-La wine sectors, as well as a description of the selected cooperatives under study. The sectors and cooperatives will then be compared to each other in chapter 4. Chapter 5 provides a reflection on the results of this comparative case study while chapter 5 concludes the report.

2. Wine Cooperatives in Veneto, Italy

2.1 Facts and Figures

The case study focuses on the Veneto wine sector but, first of all, some general data on the entire wine supply chain are presented¹. The most recent data refer to 2008 and indicate a wine production value at the farmer level of around 4 billion of Euros (table 1). In the manufacturing stage, firms (which do not cover the farm stage) have a turnover of around 7.2 billion of Euros. As result, the entire wine chain value was higher than 11 billion of Euros.

The 2000-2008 general trends shows an overall growth of the wine turnover, especially referring to the manufacturing phase. It is also evident that the annual turnover trend in the examined period changes from year to year due to climatic and meteorological factors that affect the quantity and quality of wine production.

Table 1 – The wine chain value by phase – agricultural and manufacturing. Trend of turnover and production value of Italian wines over the 2000-2008 period (million Euros)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Wine production value (at basic price) in the agricultural phase	3,998	4,266	3,892	4,011	4,623	3,698	3,586	3,405	4,026	3,771
Turnover in the manufacturing phase	5,212	5,683	6,507	6,111	6,463	5,608	6,056	6,090	7,183	n.a.
TOTAL	9,210	9,949	10,399	10,123	11,086	9,306	9,642	9,495	11,209	n.a

Source: Eurostat

Within the entire Italian wine sector, Veneto is one of the most important regions. Focusing on the farm level, this region represents 13% of the nationally harvested production and 10% of the Italian agricultural area cultivated to wine grapes (table 2). This suggests a higher yield of Veneto vineyards compared to average national data. Vineyard area tends to decrease with a different intensity at the national and Veneto levels over the 2000-2009 (except in 2008-2009) period; indeed, Veneto is one of the Italian regions where this decreasing trend was less important compared to other Italian regions, especially in the south of Italy. In the meantime, it should be noted that Veneto is one of the Italian regions with the highest share of vineyard area devoted to the production of PDO/PGI wines (95%, as compared to 69% at the Italian level²). As shown later in this report, this evidence is consistent with the better performance of the Veneto wine sector in comparison to the Italian sector as a whole.

Keeping the focus on the farmer stage, the value of wine produced by Veneto farmers was 859 million Euros in 2009, which represented 23% of the entire Italian wine production value (table 3).

Comparing 2009 to 2000, the value of wine production in Veneto has increased, although a high volatility was evident over these years, because of meteorological aspects. However, the role of Veneto on the entire Italian wine production value has significantly grown during the last decade (table 3), suggesting better performance for Veneto wines. The latter is partially explained by an increasing shift from marketing bulk wine to selling high value added wines; this has positively affected the agricultural stage of the wine chain, too.

¹ The wine sector is particularly characterised by the ambiguity of available data. Indeed, wine production is carried out both by farmers and manufacturers. In the latter case most of output value refers to final products (but manufacturers also sell semi-processed wines). Differently, the farmers' wine production is mostly used as raw materials purchased by manufacturers; however, there are also farmers that integrate the entire chain from vineyards to bottling, selling branded product.

² These data refer to 2008/2009 wine year (Source: DG-AGRI – European Commission).

Table 2 – Vineyards in Italy and Veneto: harvested production and area

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Harvested production (,000 t) – Italy	8,870	8,653	7,394	7,483	8,692	8,554	8,327	7,392	7,813	8,243
Harvested production (,000 t) – Veneto	1,156	1,162	918	1,002	1,184	934	978	1,047	1,086	1,108
% Veneto	13%	13%	12%	13%	14%	11%	12%	14%	14%	13%
Area (,000 ha) – Italy	908	892	872	868	840	793	786	782	788	802
Area (,000 ha) – Veneto	78	78	77	77	77	75	75	76	76	77
% Veneto	9%	9%	9%	9%	9%	9%	10%	10%	10%	10%

Source: Eurostat and Istat³

Table 3 – Wine Production value (at basic price) in the agricultural phase in Veneto

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Million Euros	707	778	693	757	840	621	628	626	888	859
Share (%) on Italy	17.7%	18.2%	17.8%	18.9%	18.2%	16.8%	17.5%	18.4%	22.1%	22.8%

Source: Eurostat

Shifting the focus on the manufacturing stage of the wine chain, data are not available at the regional level. Thereby, to know the turnover of Veneto processing and bottling firms an estimation process based on a balance sheets database on Italian cooperatives and companies is required.

According to these estimates (Appendix III– Methodological Aspects), wine manufacturing firms working in Veneto show a better performance in comparison to the overall Italian manufacturing wine sector over the years 2002-2008⁴. During this period, the importance of Veneto's wine industry in the overall Italian sector tends to rise (table 4). As seen before for the agricultural production stage, too (table 3), the higher performance of the Veneto wine industry is also characterising the manufacturing stage. These results suggest an improvement of quality and price placement of Veneto wines over the last decade, especially thanks to the investments made by manufacturers in downstream activities (e.g. bottling and marketing policies).

Table 4 – Trend of wine manufacturing turnover (millions €) in Veneto and in Italy, 2002-2008

	2002	2003	2004	2005	2006	2007	2008	2009
Turnover of Veneto wine manufacturers	1,491	1,617	1,602	1,631	1,710	1,860	1,939	2,032
Turnover of Italian wine manufacturers	6,507	6,111	6,463	5,608	6,056	6,090	7,183	n.a.
Veneto Share (on total Italy)	22.9%	26.5%	24.8%	29.1%	28.2%	30.5%	27.0%	n.a.

Source: elaboration on Eurostat data (Italian wine manufacturing turnover) and estimates on Bureau Van Dijk data (Veneto wine manufacturing turnover)

In the manufacturing stage of the Italian wine industry, farmer cooperatives work along with other processing and bottling companies. Indeed, farmer cooperatives focus on processing activities while their farmer members are involved in vineyards management and the production of wine grapes. In the same way, usually manufacturing investor-owned firms do not

³ The latter source has been used only for gathering 2008 and 2009 Veneto data.

⁴ This comparison cannot be extended to 2009 due to lack of data referring to the entire manufacturing wine turnover in Italy (Eurostat).

integrate backward into agricultural production but buy wine grapes or wine to be further processed from farmers⁵.

Obviously, this happens also in Veneto, where cooperatives are traditionally widespread. In Veneto there are 45 farmer cooperatives⁶ (latest data refer to 2008) which have a turnover of around 900 million Euros, 24% of the entire Italian wine co-operation (table 5). Moreover, it is worth noting that the average size of wine cooperatives based in Veneto is almost three times higher than that reported for the Italian wine cooperatives considered as a whole.

Table 5 – Wine cooperatives (2008)

	Number of cooperatives	Turnover (mln €)	% on the entire Italian Wine cooperatives	Medium size (mln € per cooperative)
Veneto	45	890	24%	20
Italy	611	3,736	100%	7

Source: Osservatorio sulla Cooperazione Agricola Italiana [Italian Agricultural Cooperation Observatory].

In order to know the turnover of Veneto wine cooperatives over the 2002-2009 period an estimation process is required, as already done for all manufacturing firms operating in Veneto (cooperatives and IOFs). In this case, along with the above mentioned balance sheets database on Italian cooperatives and companies, also the database of the Italian Agricultural Cooperation Observatory was used.

According to these estimates (Appendix III– Methodological Aspects), the turnover of wine cooperatives has increased greatly in the examined period, significantly contributing to great performance of Veneto wine manufacturers (table 6). Indirectly, this positively affected wine production value at the farm level, through value paid to wine grapes sourced from farmers.

Given the position of wine cooperatives in the food chain, as previously mentioned, the market share of cooperatives in the Veneto wine sector should be estimated referring to the manufacturing phase (table 6). To this regard, it should be stressed that these market shares have a purely indicative character, as these data are the result of a rough estimation.

Table 6 – Estimates on market shares of wine cooperatives based in Veneto⁷

	2002	2003	2004	2005	2006	2007	2008	2009
A) Turnover of Wine Cooperatives in Veneto	738	739	781	768	788	882	890	949
B) Turnover of Wine manufacturing in Veneto	1,491	1,617	1,602	1,631	1,710	1,860	1,939	2,032
Market share on total turnover of manufacturing wine firms working in Veneto	49%	46%	49%	47%	46%	47%	46%	47%

Source: estimates on AIDA – Bureau Van Dijk data, Eurostat, and Osservatorio sulla Cooperazione Agricola Italiana [Italian Agricultural Cooperation Observatory].

Comparing the turnover of Veneto wine cooperatives with that estimated for all manufacturing firms in the wine industry, the market share of cooperatives seems to stabilize around 46%–

⁵ This is what usually happens, but there are exceptions. In some Italian regions, among which Veneto (as well as Tuscany for instance) there are also a few large farmers well-known for selling their branded wines directly to retail market which cover the entire chain from the production of wine grapes to bottling and marketing activities.

⁶ All these wine co-operatives focus primarily on achieving social economic goals. Given the lack of farmer co-operatives working in the Veneto wine industry which instead primarily focus on achieving social goals, verifying hypothesis 15 specified in section 1 is not possible (see section 4.1).

⁷ The years considered for estimating co-operatives' market shares depended on data available from official sources (Eurostat, Italian agricultural cooperation Observatory) and data base on balance sheets (AIDA – Bureau Van Dijk).

47% in the second part of the last decade, after a slight decrease in the first one⁸. The latter decrease occurred although, as mentioned above, the turnover of wine cooperatives operating in Veneto increased significantly over these years; this is why IOF's turnover has grown even more in the meantime.

This evidence is supported by qualitative indications coming from interviews with stakeholders. Representatives of the national associations of cooperatives (national and Veneto federations) and sector experts were interviewed confirming the important increase of Veneto wine cooperatives' turnover over the last decade. At the same period, development and performance of IOF's seem to have grown slightly more.

Stakeholders' interviews were also used for:

1. investigating strategy and structure aspects (focusing on those considered by hypotheses raised in section 1 of Veneto wine cooperatives which could have affected cooperative performance, and how they have changed over the last decade; and
2. assessing the impact of support measures on the strategy and structure aspects previously examined.

Also 11 wine cooperatives operating in Veneto have been interviewed to pursue the above goals⁹. Thus in order to collect the direct perceptions of firms, the selection of interviewed cooperatives took into account different types of cooperatives, e.g., in terms of size and products marketed¹⁰ (table 7).

The collection of data and information from institutional stakeholders and cooperatives was required to assess strategy and structure aspects (along with linked policies) and their impact on the development and performance of wine cooperatives working in Veneto.

Table 7 – Veneto wine cooperatives interviewed¹¹

	Tier	Turnover range 2010 (millions of Euro)	Products marketed (2010)
Coop 1	First tier	< 10	Mostly Bulk Wines
Coop 2	First tier	< 10	Mostly Bulk Wines
Coop 3	First tier	10-15	Mostly Bulk Wines
Coop 4	First tier	10-15	Mostly Bulk Wines
Coop 5	First tier	10-15	Mostly Bottled Wines
Coop 6	First tier	15-20	Mostly Bottled Wines
Coop 7	First tier	20-30	Mostly Bulk Wines
Coop 8	First tier	20-30	Mostly Bottled Wines
Coop 9	First tier	20-30	Mostly Bottled Wines
Coop 10	First tier	20-30	Mostly Bottled Wines
Coop 11 ¹²	Second tier	30-40	Mostly Bottled Wines

⁸ Focusing on all manufacturers operating in the wine industry, market shares do not refer only to sales of final consumer wines, but they also take into account the turnover of manufacturers for marketing semi finished wine products.

⁹ Usually, interviews have been made to the general manager of the co-operatives; as an alternative, interviews refer to production/sales manager or co-operative president.

¹⁰ Another aspect taken into account (but not specified in table 7, due to privacy reasons) for selection of co-operatives has been the geographical area within Veneto region (i.e. province area in which they work).

¹¹ According to the purposes of the work, obviously, wine co-operatives interviewed are not a representative sample of the entire co-operative movement working in the Veneto wine industry; anyway it suggests qualitative information about matters to be addressed in this report.

¹² In 2010 it had 10 primary co-operative members; two of them are reported in table 7 (i.e. Coop 6 and Coop 7). 5,000 farmers are associated to the ten primary co-operative members of the second tier Coop 11.

2.2 Strategy and Structure

Thanks to indications coming from interviews with institutional stakeholders and 11 selected cooperatives (table 7), this section describes structural and strategic features of the Veneto wine cooperatives and changes that occurred over the 2000 – 2010 period. In particular, the analysis focused on the structural and strategic aspects strictly linked to the hypotheses stated in section 1 of this report.

Vertical integration and kind of products marketed

Over the 2000-2010 years, most of Veneto wine cooperatives significantly increased their presence in the downstream phases of the chain as shown by the important and widespread growth of bottled wines (in terms of sales value and impact on total production and turnover). Also investments in promotion and marketing activities grew in order to facilitate branded wines sales; however, it should be pointed out that there are only a few cooperatives (the largest ones) heavily engaged in pursuing brand product marketing and innovation strategies. At the same time, the growing sales of bottled wines were partially linked to the private labels market.

As a result, nowadays, within the Veneto wine industry different types of cooperatives work, in terms of vertical integration and products marketed. Alongside many wine cooperatives still involved primarily in first-level processing activities, marketing bulk wines to other cooperatives or investor owned firms, there are also several Veneto cooperatives which integrate the entire wine chain up to supplying bottled wines directly to retail and Ho.Re.Ca. (Hotel, Restaurant, Catering) channels of the Italian market or to foreign markets.

In many cases, focusing on bottled and branded wines involves medium and large cooperatives¹³, which have often undertaken merger operation during the examined period to get minimum economic size required to develop investments in the downstream processing phases or to match large retailers' requirements. To this regard, it should be noted that merger processes were undertaken amongst cooperatives to strengthen both vertical and horizontal integration¹⁴. Indeed, the latter strategy may favour the reduction of production costs and, at the same time, improve the bargaining power of manufacturers (and consequently farmer members, in case of agricultural cooperatives) versus retailers (MIPAAF 2009), especially when the production tightly refers to PDO/PGI wines, as is the case in Veneto¹⁵.

In the meantime, differently from what happens amongst IOFs, there are still many cooperatives which primarily market bulk wine, although they have expanded into the sale of bottled wines over the last decade. To this regard, some explanations come out from cooperatives' specificities and especially the higher complexity of their governance (compared to that of investor-owned firms). Indeed, expansion into downstream processing activities requires changes in business policies with respect to the cooperative-member relationship (e.g., the date of payment to farmer members for raw materials supplied). Shifting focus from bulk wine to bottled wine entails higher capital investment contributions, as well as the extension of the financial cycle of

¹³ Here, it should be underlined that the meaning of "medium and large" firms does not refer to the official European definition (according to the latter, the turnover of medium sized firms ranges from 10 to 50 million Euros, whereas the turnover of large-sized firms overcomes 50 million Euros), instead, taking into account, the average size of the Veneto wine co-operatives in terms of turnover (i.e. 20 million Euros; table 5). Thus, considering the specific context of Veneto wine industry, in this report the co-operatives with a turnover ranging from 10 to 30 million Euros have been assumed as medium-sized while co-operatives with a turnover higher than 30 million Euros are considered larger-sized.

¹⁴ See Giacomini and Montedoro (2009).

¹⁵ In these cases, control of production can really be effective, supporting the bargaining power of producers in case of market distinction and consumers' appreciation of PDO/PGI wines. To this aim (horizontal integration and control of PDO/PGI wines' production), some important mergers among co-operatives were carried out (e.g. among Veneto co-operatives supplying Valpolicella PGI wines).

the cooperative (which cashes its sales in later, due to bottling and storage activities) and, consequently, of the payment to farmer-members for wine grapes procured. At the same time, wine cooperatives' farmer-members demand immediate payments for raw materials delivered and seem unwilling to tolerate a longer pay period. For these reasons, even today, many wine cooperatives keep a part of their activities focused on bulk wine, in order to boost their liquidity and thus be able to pay upfront at least for a part of the wine grapes delivered by members. In order to partially overcome this constraint to their development, many Veneto wine cooperatives have introduced innovative methods regarding governance of the relations with farmer members, as shown in the next section.

Summing up, over the past decades Italian wine cooperatives have traditionally focused on bulk wines and mainly met the marketing needs of their members by securing a market for their members' produce. To this regard, it should be noted that cooperative firms guarantee marketing of the entire agricultural production of their farmer-members. Indeed, farmers' choice of becoming a cooperative member is also linked to this function even today and this should be stressed as it affects cooperatives' efficiency. Given this defensive strategy of protecting members' farm assets, shifting into an offensive strategy of marketing higher value end products is conditioned upon farmer-members' adoption of the new collective objective. In turn, adoption of this strategy necessitates a wholly different approach on the part of farmer-members. Implementing offensive marketing strategies was initiated in the past few decades, initially by the largest wine cooperatives, and it was extensively adopted by cooperatives during the last ten years. This tendency is most evident in Veneto, where wine cooperatives are thriving more than wine cooperatives in other regions. According to all evidence available, the adoption of such offensive marketing strategies is expected to continue in the coming years.

Structural aspects: first tier / federated cooperatives; innovative ownership, governance, and capital acquisition methods.

There are only two federated cooperatives operating in the Veneto wine industry that carry out processing/marketing activities¹⁶; considered as a whole, these two secondary cooperatives have 13 primary cooperative-members with approximately 8,000 farmer-members.

In this context, it is difficult to generalize about differences between first- and second-tier cooperatives, also considering that the efficiency of federated cooperatives depends on several factors, including the type of products marketed (bulk or bottled wines), the governance of the relationship between the cooperative and its farmer-members, the socioeconomic characteristics of the membership structure, etc. However, it seems that the performance of federated cooperatives may have been affected by governance issues that need to be addressed efficiently. For instance, in the cases where cooperative-members are not obliged to deliver all their products to the federated cooperative, competition among second-tier cooperatives and its first-tier members may arise, especially with respect to the prices offered. For these reasons, most of the bottled and branded wine focused cooperatives (operating in Veneto), among which federated cooperatives, introduced this obligation in the last decades in order to improve productive and commercial planning required by their growth strategy¹⁷. Others have decided to plan together with their members the quantity and quality of agricultural production to be supplied, on an annual basis.

With respect to capital acquisition, usually investment capital required to develop Veneto wine cooperatives' activities over the 2000-2010 period came from their members. This happened in

¹⁶ Actually, other two second-tier co-operatives exist, but only one of these focuses on processing or marketing activities. They only focus on technical assistance services for the benefits of members, e.g. advice for compliance with European, national and regional laws/regulations, relations with institutions and public administrations, etc.

¹⁷ This obligation was firstly introduced by a few co-operatives in the 1970's; in the subsequent decades, co-operatives which introduced the same obligation increased in number.

different ways, among which especially by: 1) putting aside part of income in indivisible reserve accounts; 2) applying a deduction (i.e. withholding a part of the value of agricultural product to be paid to farmer members; 3) social lending.

The latter – historically very important in financing Italian cooperatives – is an onerous debt undersigned by the members themselves. In this regard, it should be noted that the loan from the members to the cooperative is distinguished by two incentives as compared to the loans given by members in other business entities: the withholding tax on loan interest is 20% instead of 27% and this withholding is classified as a tax and not as income (fiscally speaking, that means that it is not added to other income).

Another relevant way to collect financial resources by members is the reservation of a part of cooperatives' income to indivisible equity reserves, rather than deciding to distribute the entire income to farmer-members, raising the value paid for agricultural products delivered by them. Accounting of net proceeds to indivisible equity reserves is consistent with the Italian fiscal framework that favours this practice. However, to this regard, it should be noted that these funds may never be distributed to members, even in the case the cooperative is liquidated¹⁸.

Lastly, over the last two decades several cooperatives have introduced in their bylaws the possibility to withhold part of the value of agricultural produce to be paid to farmer-members in order to finance the cooperative's development. These funds can be considered (accounted for) both as debts versus members (usually they are not onerous) or as a capital increase, depending on a cooperative's bylaws. The latter way of collecting risk capital from members has the advantage (compared, to the request for a new capital contribution) of flexibility. That is, usually it is implemented during periods of increasing prices.

Shifting to governance issues, it is important to distinguish between ownership governance and the governance of the relations with farmer members. For what concerns the former issue, there have not been significant changes over the last decade (as previously) in terms of board structure (all wine cooperatives operating in Veneto have always adopted the first-tier board structure, with supervisors and executives in a single Board, called the Board of Directors), composition of Board of Directors (which generally is constituted only by members), election rules for members, etc.

On the contrary, some innovative methods were introduced by cooperatives over the last decade in structuring the cooperative-member relationship. Consistently with development and improvement of cooperatives' activities – in terms of quality products, bottling, launching of new high segment products, improving marketing and production planning – over the time, several cooperatives introduced in their bylaws the legal obligation to deliver all members' production or clauses aimed to introduce/strengthen the link between prices paid to farmer members (for raw materials withdrawn) to: 1) quality management of vineyard and agricultural production of members (consistently with the cooperative growth strategy), or, 2) the quality of wine obtained and marketed by the cooperative thanks to wine grapes delivered by members. Such innovations surely have favoured forward vertical integration by wine cooperatives and the quality improvement of their products (that also results in better prices and incomes for farmer members).

Collaboration with other cooperatives or IOFs

¹⁸ For more details on the Italian legal and fiscal framework provided for co-operatives, see Bono (2012).

Collaboration with other cooperatives is very widespread in the Veneto wine industry and very often collaborative arrangements have become rather stable over the years. Trading among wine cooperatives involves semi-finished products to be further processed (bulk wines), wine ready to be bottled, or final consumer products (bottled wines). Thereby, these agreements range over different purposes, (e.g., matching the range of product requirements set by of retailers, improvement of processing and bottling plant efficiency, etc.). Moreover, it should be noted that, in some cases, these collaborations represent a first step towards a subsequent merger of the participating partners.

Many wine cooperatives working in Veneto also set up collaborative agreements with IOFs, although these are surely less widespread compared to those with other cooperatives. There are two different kinds of collaborative arrangements with IOFs: on the one hand, they consist of sharing companies (by controlling or minority shares) used to develop specific: 1) products (bottling wines), 2) market segments (such as private label sales) or 3) branded wines sales (concentrating brand policies and promotion activities in a specialized firm). On the other hand, some cooperatives stabilized their relationship with bottling IOFs by multi-year contracts so as to guarantee the marketing of bulk wines produced; these contracts were financially supported by the “supply chain contracts” policy, aimed at stabilizing the relationship among firms operating in different stages of the wine supply chain.

2.3 Relevant Support Measures

Information on relevant support measures that affect the strategy and structure adopted by Veneto wine cooperatives was gathered through interviews with institutional stakeholders and 11 wine cooperatives (table 7).

The policies with the most significant impact on structure and strategy over the last decade, certainly, refer to grants from the European Agricultural Fund for Rural Development (EAFRD)¹⁹ and funds for “Promotion in Third Countries”, provided by the Common Market Organization (CMO) for wine in 2008²⁰. This is why these policies are considered to be strategically consistent with the current and future competitive challenges.

For what concerns the former, grants from EAFRD (together with national co-financing) supported Veneto wine cooperatives in improving their productive capacity, especially by supporting investments in fermentation, bottling plants, technology assets, storage, and marketing activities. Almost all wine cooperatives operating in Veneto had access to these grants mainly to invest in raising the quality of produced wine, but in the last years of the past decade, they were also used by many cooperatives to finance marketing and promotion activities. Thereby, support measures scheduled by Veneto Rural Development Plans (which plans and manages subsidies available by EAFRD) encouraged wine cooperatives of the Veneto Region to develop processes and activities along the downstream phases of the wine supply chain (i.e., their degree of vertical integration). Moreover, subsidies from EAFRD (in this case, too, together with national co-financing) also financed supply chain contracts involving firms operating in different stages of the wine chain. This measure aimed at coordinating and stabilising the relationships between firms, in terms of the quantities and prices for raw materials or semi-finished products, trading within the Veneto wine chain.

¹⁹ It is a European agricultural fund which was set up for the financing of Rural Development Programme (RDP) actions by European Union Council Regulation (EC) No 1290/2005 of 21 June 2005 on the financing of the Common Agricultural Policy (CAP).

²⁰ See Council Regulation (EC) No 479/2008 of 29 April 2008 on the common organisation of the market in wine.

Referring to the Wine CMO (Common Market Organization), subsidies for promotion in third countries were used by many cooperatives to extend their export orientation²¹. These projects were mainly carried out in collaboration between cooperatives and they backed up wine cooperatives' export strategies through support for investments in marketing and promotion activities. In some cases this support measure enabled cooperatives to enter into new markets (especially North America), previously not reached. Overall, considering the type of Italian wines mostly marketed outside the European Union (but also in European countries), this support measure indirectly favoured the shift from bulk to bottled and branded wines. For what concerns constraints which emerged in accessing these grants and managing them, it should be noted that some cooperatives, especially those without appropriate business management skills, have experienced troubles caused by bureaucracy.

Up to a few years ago, many wine cooperatives also benefited from distillation-related measures. These measures supported the income of wine cooperatives and their members and were therefore useful in overcoming market failure situations. However, these measures did not facilitate the strategic shift of production and activities towards higher value products; on the contrary, low-quality wine products have benefited from this policy the most. Summing up, considering the wine cooperatives operating in Veneto as a whole, this measure seems to have indirectly limited development in focusing strategy on higher value added products.

For what concerns Producer Organizations (POs), it should be remarked that there is no PO in the Veneto wine industry. Unlike what happens in the fruit and vegetables sector, support measures for wine POs apply to national/regional regulations which rarely provided funds for POs' activities; due to lack of financing support, POs did not get off the ground in Italy as well as in Veneto.

Another policy that might have influenced wine cooperatives in recent years is the vineyards uprooting, promoted by the new CMO with the aim to improve matching of demand and supply in the wine industry. However, the reduction of vineyard area has mainly involved Italian regions where wine quality is averagely lower; this is not the case for Veneto where, indeed, this policy does not seem to have a significant impact on the wine industry and cooperatives operating in it.

2.4 Hypothesis Testing

According to qualitative perceptions and information gathered by institutional stakeholder and the management of cooperatives selected (table 7), hypotheses 8a and 8b (table 8) seem to be supported.

The growth of sales and income of wine cooperatives in Veneto (and consequently of the price of wine grapes paid to farmer members) is explained by the development path along the downstream phases that led to bottled wines supply and to the marketing of final consumer and branded products. Not by chance, amongst Veneto wine cooperatives, usually those performing better registered also a higher development in integration of downstream processing and marketing activities (often the largest cooperatives).

Thereby, overall speaking, it seems that Veneto wine cooperatives improved their position in the food chain so as to strengthen their capacity to add value to their production. However, as seen in table 6, this great performance seems to be slightly lower than that of IOFs²². Unlike what still partially characterises wine cooperatives in Veneto, almost all IOFs in the same industry and

²¹ The number of Veneto wine co-operatives which had access to these funds is not noted, but it seems that they are not few. However diffusion of access to these measures is surely less widespread compared to accessing on EAFRD grants.

²² Obviously, this is an overall assessment given that within the entire Veneto wine industry, firms (co-operatives and IOFs) performed in a different way.

region market exclusively bottled wines. Given that focusing on the downstream activities of the wine chain seems to explain the better performance of firms, overall differences between cooperatives and IOFs, in terms of position in the food chain and strategic aspects, seem to explain the slight decrease of cooperatives' market share within the Veneto wine industry over the 2000-2010 decade (table 6). Moreover, differences amongst cooperatives and IOFs, in terms of products marketed (bottled vs. bulk wines), may also explain the lower export propensity of (Italian as well as Veneto) wine cooperatives in comparison to other companies²³ (MIPAAF, 2011). Given that Italian wine turnover was mainly pulled by foreign demand over the last decade, also Veneto wine cooperatives took advantage of increasing demand, though on a lower scale compared to IOFs²⁴.

Vertical integration of cooperatives and in particular the type of product marketed (final consumer products vs. semi finished products) could also be related to the possible adoption of innovative ownership, governance, and capital acquisition methods. This is what hypothesis 10 refers to. Information gathered by institutional stakeholders and selected cooperatives (table 7) gives mixed results depending on the specific issue examined.

Referring to capital acquisition and governance ownership, Veneto wine cooperatives still stick to the traditional methods and structure of Italian cooperatives. When required by cooperatives' growth strategy, investment capital mainly comes from farmer members. To this regard, it is interesting to note that the farmer cooperatives more able to collect debt or risk capital from their members (adopting one of the methods previously discussed) are those exhibiting a better performance.

In the meantime, the ownership and governance of cooperatives have remained rather stable. On the other hand, it seems that farmer cooperatives more involved in selling final products have a higher chance of adopting a new arrangement in dealing with farmer-members (in terms of obligation to deliver members production or methods used to define prices paid to raw materials supplied by farmer members). To this regard it seems difficult to distinguish causes and effects of this relation.

Some policies supported wine cooperatives operating in Veneto in integrating downstream processing and marketing activities and improving the type of products marketed. Among these policies, European Agricultural Fund for Rural Development (EAFRD) and Funds for "Promotion in Third Countries" provided by the CMO for wine played a key role. These support measures favoured the improvement of cooperatives performance in terms of turnover and income, and, consequently, the cooperatives' capacity to market and add value to raw materials supplied by farmer members.

Focusing on hypothesis 17, it is difficult to generalise considerations on the efficiency of federated cooperatives compared to that of first-tier ones, given the low number of second tier cooperatives working in the Veneto wine industry. It rather seems that efficiency of federated cooperative depends on several factors, as explained above. However, federated cooperatives seem to face competition from their own first-tier members. This risk needs to be managed by introducing new methods to structure relationships with members more efficiently.

Referring to hypothesis 18, stable collaborative agreements between cooperatives or between cooperatives and IOFs tend to improve cooperatives' performance²⁵. Indeed such arrangements have resulted in improved economic results in ways such as through improvements on

²³ Tendency, the Italian wine export is even more linked to bottling wines (91% of total wine Italian export in 2011).

²⁴ See Bono (2012, p. 55).

²⁵ See Giacomini and Montedoro (2009).

cooperatives' product portfolios, opening and developing new marketing channels, reduction of promotion costs, guarantee of market placement, and reduction of income volatility.

Lastly it should be noted that hypothesis 15 could not be tested due to the lack of wine cooperatives that focus primarily on achieving social goals.

Table 7 – Hypothesis testing on the wine cooperatives operating in Veneto

Hypothesis	Hypothesis Description	Hypothesis Testing
8a	A higher degree of vertical integration of cooperatives in a sector is positively associated with higher producer income.	Hypothesis supported. Forward vertical integration in the downstream processing and marketing phases of the wine supply chain supports cooperatives' performance in terms of producer income (consequently that also means higher prices paid to farmer-members for agricultural production delivered)
8b	The cooperative as an integrated processor develops better products and promotes them so effectively as to increase market demand.	Hypothesis verified. Vertical integration of the downstream processing and marketing phases of the wine chain supports sales and developments of new and better products.
10	Agricultural cooperatives that are successfully involved in selling final, consumer products, have a higher chance of adopting innovative ownership, governance, and capital acquisition methods.	Overall, this hypothesis is not verified focusing on ownership, governance and capital acquisition methods. However, it should be noted that agricultural cooperatives successfully involved in selling final products are often those that had been more able to collect financial resources by members (using different available methods). At the same time, it seems that farmer cooperatives more involved in selling final products (or cooperatives with an ongoing process in selling consumer products) have a higher chance of adopting a new arrangement dealing with farmer members.
15	Agricultural cooperatives which focus primarily on achieving social goals do worse, in terms of economic performance, than cooperatives which focus primarily on achieving economic goals.	This Hypothesis cannot be verified due to lack of wine cooperatives which focus primarily on achieving social goals
17	The federated cooperative structure (more than first tiers) is less efficient than the centralized one (first tier structure; farmers are directly members to the cooperative).	It is difficult to generalize consideration on the efficiency of federated cooperatives given that the latter changes depending on several circumstances and on single cooperatives. Anyway, federated cooperative seems to be prone to risking competition behaviour from their members and that risk needs to be managed
18	Agricultural cooperatives which collaborate with other cooperatives or IOFs do better, in terms of economic performance and services provided to their members.	Stable collaborations amongst cooperatives or between cooperatives and investor owned firms improve cooperatives' performance in different ways: e.g. extension of products marketed, opening and developing of new market/channels, reduction of promotion costs, guarantee of market placement, reduction of income volatility

3. Wine Cooperatives in Castilla-La Mancha, Spain

3.1 Facts and Figures

The south eastern Spanish region of Castilla La Mancha (CLM) has 50% of the country's vineyards. Furthermore, Castilla La Mancha has the largest vineyard surface on the planet (500,000 hectares). So, it is perhaps hardly surprising that the region currently responsible for over half of Spain's total wine production. Therefore, Castilla La Mancha becomes a good subject to study. However, it is important to take into account that it is cooperatives who actually produce more than 70% of the region's total wine production; and a significant percentage on a national level.

Table 11 – Production and area in CLM-Spain

Region	Production ⁽¹⁾ Mil hl	Area ⁽²⁾ Ha.	Performance ⁽³⁾ Mil litres/ha
Castilla-La Mancha	19,964	495,494	4.2
Spain	39,499	1,049,358	3.8
% CLM/Spain	50.5%	47.2%	110.5%

(1) Estimate year 2010.

(2) Year 2009.

(3) Average years 2007/2008/2009

Source: Annuary 2010. Ministerio de Agricultura, Alimentación y Medio Ambiente (Area) y Semana Vitivinícola (Production)

The wine industry in Spain (agricultural and manufacturing sectors) has an estimated value of seven billion Euros ²⁶ of which six billion Euros are generated through the manufacturing sector and one billion through the agricultural sector. The production industry's big contribution to the general wine industry continued to increase throughout the 2000s. This percentage was significantly higher than what could be explained by data variability. Factors associated with the climate change and so on often impact on the trends of the annual harvest.

Table 12– The wine chain value by phase – agricultural and manufacturing. Trend of turnover and production value of Spanish wines over the 2000-2009 period (million of Euros)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Wine production value (at basic price) in the agricultural phase	1,516	871	1,095	1,364	1,181	853	958	1,156	1,020	814
Turnover in the manufacturing phase	4,885	5,522	5,723	5,134	5,777	5,617	5,760	5,971	6,011	4,671 ⁽¹⁾
TOTAL	6,401	6,393	6,818	6,498	6,958	6,470	6,718	7,127	7,031	5,485

Source: Eurostat, (1) SG Fomento Industrial e Innovación

While the significance of the vineyards and wine production in CLM is unquestionable, its evolution over recent years is characterized by: a) a continuous increase of empty vineyard hectares in the region (100,000 hectares in only 10 years or 20% of total surface), due to low grape prices, aging and a lack of people to replace current grape harvesters in up and coming generations, and above all because of the vineyard uprooting program, encouraged with CMO funds; this grubbing-up scheme has led to a positive structural adjustment, both from social and product perspectives. Thus, some nonviable exploitations may disappear and older/retired vine-growers activity has declined. b) stability (even a small increase) of productive capacity despite the decrease of vineyard surface, which means that yields per hectare have boosted. This is thanks to the dynamic restructuring and conversion process of vineyards, financed by the EAFRD funds of CMO which basically, consist, of a variety of transformations and irrigation. In CLM, table wines are a great deal more popular than PDO/PGI wine, which means that the price received by farmer-members and added value is lower than the Spanish mean level. The overwhelmingly superior portion of bulk wine sales versus bottled wine sales has also been an important determinant of this trend. Furthermore, the most popular wine varieties, Airén,

²⁶ Eurostat data were available up to 2008

Tempranillo and Bobal, have the lowest unitary prices compared to wines from other regions in Spain.

Table 13 – Vineyards in Spain and Castilla-La Mancha (CLM): harvested production and area (2000-2009)

	2000	2001	2002	2003	2004	2005	2006	2007	2008	2009
Harvested production (,000 t) - Spain	6,333	4,769	5,602	6,928	6,955	5,741	6,084	5,699	5,760	5,291
Harvested production (,000 t) - CLM	3,305	2,271	2,895	3,611	3,634	3,043	3,142	2,905	3,134	2,734
% CLM	52%	48%	52%	52%	52%	53%	52%	51%	54%	52%
Area (,000 ha) – Spain	1,229	1,211	1,202	1,207	1,200	1,180	1,174	1,169	1,165	1,113
Area (,000 ha) – CLM	600	600	584	567	562	533	533	529	529	495
%CLM	49%	59%	49%	47%	47%	45%	45%	45%	45%	44%

Source: OIV, MAGRAMA, Instituto de Estadística de Castilla-La Mancha

Despite the fact that the annual wine production of the region has been 52% to 54% of Spain's total wine production (table 13), the trends mentioned above have resulted in the total value received by CLM's farmer-members in the agricultural sector being less than 50% of Spain's. (table 14). The high shares of some years are due to increase of unitary yields more than due to improvements in the industrial and commercial sectors. This is because the sale of wine in bulk hasn't changed significantly, despite the share being volatile due to climate conditions and erratic prices.

Table 14 – Wine Production value (at basic price) in the agricultural phase in Castilla-La Mancha (2000-2009)

	2000(*)	2001	2002	2003	2004	2005	2006	2007	2008	2009
Million Euros	733.68	503	493	534	506	449	441	496	556	n.a.
Share (%) on Spain	48.4%	57.7%	45.0%	39.1%	42.8%	52.6%	46.0%	42.9%	54.5%	n.a.

Source: (*) Only data for year 2000 was obtained from Eurostat. The rest have been estimated based on that value.

The data shows that, the prevailing bulk sales in CLM are at lower prices, in comparison to other regions in Spain where bottling is predominant, the amount of wine sales in the manufacturing sector is reduced (15-20%).

Table 15 – Estimates on manufacturers (including cooperatives) wine turnover in Castilla-La Mancha (2002-2010)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Turnover of wine manufacturers. Trend, Index 2008=100	80%	82%	87%	90%	98%	107%	100%	75%	80%
Turnover of wine manufacturers (million Euros)	1,162	1,195	1,266	1,309	1,435	1,554	1,458	905.4	964

Source: Estimated with data SG Fomento Industrial e Innovación

Table 16 – Total wine manufacturing turnover (millions €) in Castilla-La Mancha and in Spain (2002-2010)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Turnover of wine manufacturers (IOFs + Cooperatives)	1,162	1,195	1,266	1,309	1,435	1,554	1,458	905,4	964
Turnover of CLM wine manufacturers (Cooperatives)	573	589	624	645	707	766	718	540	575
Turnover of Spanish wine manufacturers	5,723	5,134	5,777	5,617	5,760	5,971	6,011	4,671*	n.a,
CLM Share (on total Spain)	14%	16%	15%	15.9%	17%	17.8%	16.6%	19%	n.a.

Source: elaboration on Eurostat data (Spanish wine manufacturing turnover) and estimates on Cooperatives Agro-alimentarias, * SG Fomento Industrial e Innovación

In CLM's wine sector, cooperatives are more important than IOFs. They represent more than 70% of the sector's total wine production. CLM's wine cooperatives represent 40% of the whole of Spain's wine cooperatives, while their turnover accounts for 47% of the national wine cooperative turnover (table 17). There are 254 wine cooperatives in CLM, and, many are situated in small and disadvantaged rural areas, in which case many are the largest firms in their municipalities. In terms of hectolitres produced, the largest first-tier wine cooperatives of Spain and the European Union are located in CLM (figure 1). An important second-tier cooperative (BACO) that commercializes 100% of the production of nine first-tier cooperatives is also based in CLM.

Table 17 – Basic statistics for wine cooperatives in CLM and Spain (2010)

	Number of cooperatives	Turnover (million €)	% on the entire Spanish Wine cooperatives	Medium size (million € per cooperative)
CLM	254	574	47%	2.26
Spain	628	1,212	100%	1.93

Source: Cooperatives Agro-Alimentarias (2010)

Figure 1 Top Wine Cooperatives in Spain (2009)

Name	Localization	Turnover (million €)
Second-tier Co-ops		
1. Viñaoliva	Extremadura	48 ⁽¹⁾
2. Baco	Castilla-La Mancha	40 ⁽²⁾
3. Cevipe	Cataluña	32
First-tier Co-ops		
1. Virgen de las Viñas	Castilla-La Mancha	27
2. Viñedos de Aldeanueva	La Rioja	25
3. Cristo de la Vega	Castilla-La Mancha	23

(1) Cooperatives bill together wine and olive oil

(2) Data: 2010-11 (in 2009 BACO had a turnover of 28 Million €)

Source: OSCAE-09

CLM's cooperatives are both economically and socially important; there are 92,500 farmer-members, which is roughly 9% of the region's workforce. Cooperatives produce more than 70% of the region's wine. IOFs are smaller, yet the average unitary value of cooperatives' sales is lower than that of the IOFs'. This is primarily due to excessive dependence on bulk wine sales (figure 2) at lower prices. (Low prices make the market more competitive). Table 19 demonstrates that cooperatives command almost 60% of the whole regional wine market, a ratio that has grown substantially during the economic crisis. This is because of trade by the IOFs which came into play over recent years (in some cases their investments were financed with surpluses of the property boom.)

Table 18 – Estimates on cooperatives' wine turnover in Castilla-La Mancha (2002-2010)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Turnover of wine cooperatives.	99%	102%	108%	112%	123%	135%	125%	94%	100%
Trend, Index 2010=100 ¹									
Turnover of wine cooperatives (million Euros) ²	573	589	624	645	707	766	718	540	575

Source: ¹ Eurostat; ²Balance 2011. Cooperatives Agro-alimentarias

Table 19 – Estimates on market shares of wine cooperatives based in Castilla-La Mancha (CLM) (2002-2010)

	2002	2003	2004	2005	2006	2007	2008	2009	2010
A) Turnover of Wine Cooperatives in CLM ⁽¹⁾	573	589	624	645	707	766	718	540	575
B) Turnover of Wine manufacturing in CLM ⁽²⁾	1,162	1,195	1,266	1,309	1,435	1,554	1,458	905.4	964

Market share on total turnover of manufacturing wine firms working in CLM	49.31%	49.29%	49.3%	49.2%	49.3%	49.3%	49.2%	59.6%	59.7%
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Source: ⁽¹⁾ Estimates on Cooperatives Agro-alimentarias; ⁽²⁾ Estimate with data SG Fomento Industrial e Innovación
Data has been collected through various interviews and questionnaires from a sample of 32 cooperative firms, 30 first-tier cooperatives and the two existing second-tier cooperatives based in the region. These cooperatives are representative of the total 254 existing wine cooperatives in Castilla-La Mancha, in terms of size, special dispersion, commercial dynamics and strategies.

Table 20 –Wine cooperatives interviewed in Castilla-La Mancha

	Tier	Turnover 2010 (millions of Euro)	Products marketed (2010)
Coop 1	First-tier	1.76	Bottled (4%) Packaged (10%) Bulk (86%)Wines
Coop 2	First-tier	2.69	Bottled (15%) Bulk (85%) Wines
Coop 3	First-tier	2.55	Bottled (2%) Bulk (50%) Must (48%) Wines
Coop 4	First-tier	n.a.	Bottled (10%) Bulk (75%) Must (15%) Wines
Coop 5	First-tier	2.53	Bottled (1%) Packaged (1%) Bulk (98%) Wines
Coop 6	First-tier	1.11	Bottled (0.5%) Packaged (0.5%) Bulk (99%) Wines
Coop 7	First-tier	n.a.	Bottled (20%) Packaged (2%) Bulk (78%) Wines
Coop 8	First-tier	n.a.	Bottled (1%) Packaged (2%) Bulk (47%) Must (53%) Wines
Coop 9	First-tier	7.3	Bottled (1%) Packaged (3%) Bulk (96%) Wines
Coop 10	First-tier	2.78	Bottled (0.5%) Packaged (3.5%) Bulk (96%) Wines
Coop 11	First-tier	n.a.	Bottled (10%) Packaged (10%) Bulk (70%) Must (10%) Wines
Coop 12	First-tier	n.a.	Bottled (1%) Bulk (99%) Wines
Coop 13	First-tier	5.84	Packaged (3%) Bulk (97%) Wines
Coop 14	First-tier	8.49	Bottled (10%) Bulk (90%) Wines
Coop 15	First-tier	5.49	Bottled (2%) Bulk (98%) Wines
Coop 16	First-tier	n.a.	Bulk (100%) Wines
Coop 17	First-tier	0.01	Bulk (100%) Wines
Coop 18	First-tier	3.14	Bottled (5%) Bulk (90%) Must (5%) Wines
Coop 19	First-tier	2.56	Bottled (4%) Bulk (96%) Wines
Coop 20	First-tier	5.86	Bottled (5%) Bulk (95%) Wines
Coop 21	First-tier	n.a.	Bottled (4%) Packaged (6%) Bulk (90%) Wines
Coop 22	First-tier	0.79	Bottled (5%) Bulk (95%) Wines
Coop 23	First-tier	1.68	Bulk (100%) Wines
Coop 24	First-tier	9.59	Bottled (5%) Packaged (5%) Bulk (50%) Must (40%) Wines
Coop 25	First-tier	n.a.	Bottled (2%) Bulk (98%) Wines
Coop 26	First-tier	n.a.	Bottled (0.5%) Packaged (0.5%) Bulk (99%) Wines
Coop 27	First-tier	2.75	Bulk (100%) Wines
Coop 28	First-tier	2.69	Bottled (4%) Bulk (96%) Wines
Coop 29	First-tier	26.4	Bottled (20%) Bulk (80%) Wines
Coop 30	First-tier	23	Bottled (9%) Bulk (91%) Wines
Coop 31	Second-tier	1.75	Bulk (100%) Wines
Coop 32	Second-tier	40	Bottled (2%) Bulk (98%) Wines

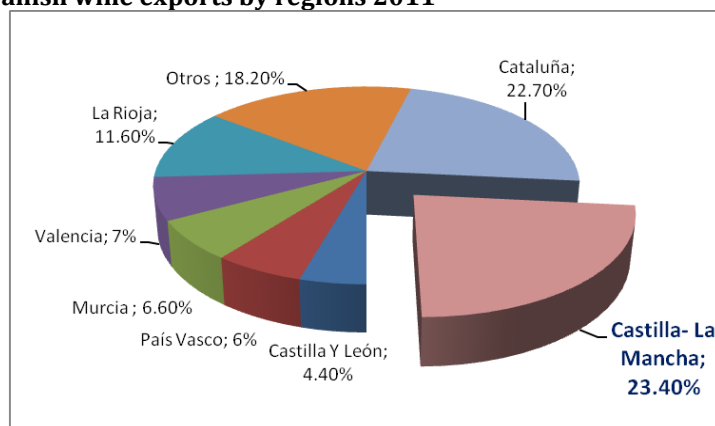
3.2 Strategy and structure

Internationalization

Internationalization has been the most crucial strategy pursued by CLM cooperatives; it accurately reflects the evolution of the CLM cooperatives' trade activities. In only a decade, exports have soared based, mainly, on an ultra competitive price, due to the world-wide boom of bulk wine sales and on the demise of distillations in the CMO that made an opening and adjustments to exterior trade channels necessary. The year 2011 has been the culmination year of this process and CLM's regional participation in wine exports has been boosted spectacularly.

Additionally, bulk wine prices have increased (in relative percentage terms) and have caused companies to focus more on other marketing strategies rather than the bottling strategy since the beginning of the 2000s.

Figure 2 Value of Spanish wine exports by regions 2011



Dynamics of the last ten years has been exponential, and growth in 2011 has been spectacular (Figures 4 and 5). The CLM region was the most dynamic trader among Spanish regions in the world market, even when considering that the ratio is calculated based on the value of exports.

Figure 3 Volume of Spanish wine exports by regions, 2011

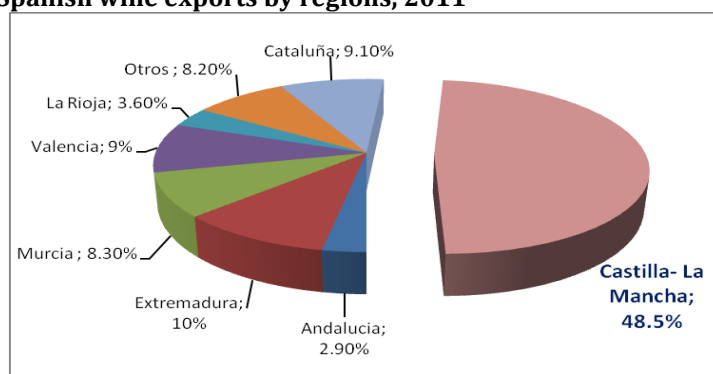


Figure 4 Variation 2010/11 in value of wine exports by region

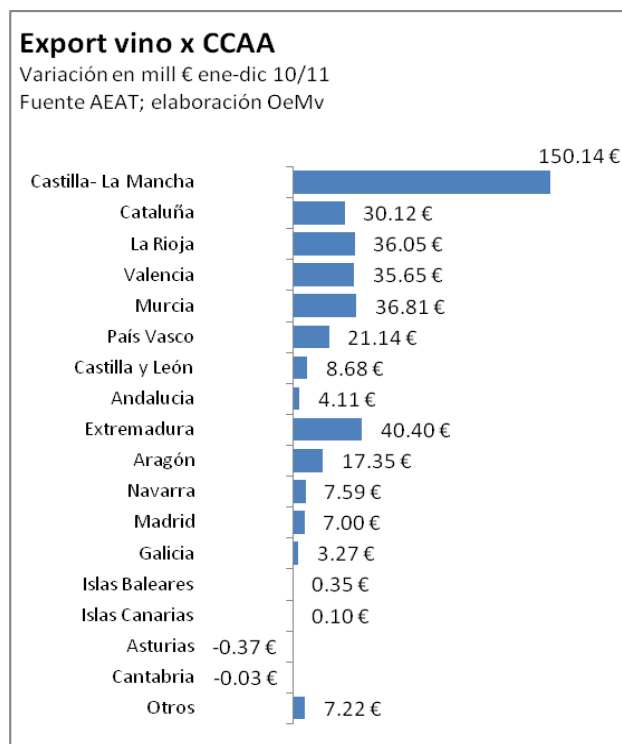
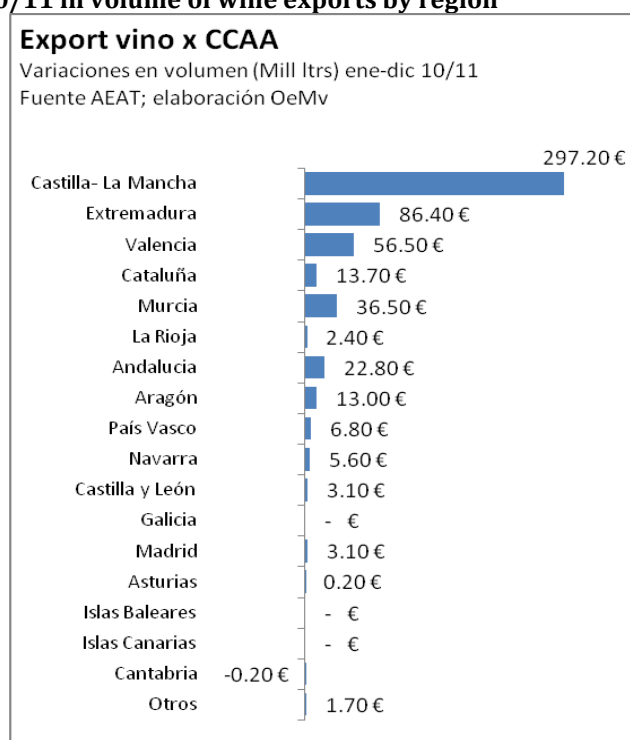


Figure 5 Variation 2010/11 in volume of wine exports by region



In comparison to other regions, Castilla-La Mancha accounts for almost 50% of all Spanish exports in volume, but in value this percentage only represents 24% of all national exports. This is due to its expertise in the sale of bulk wines with the lowest average unitary prices (along with Extremadura) of all Spanish regions; only 0.47 Euros per litre.

Table 21 Average wine price (€/L)

Region	Jan-Dec 10	Jan-Dec 11	var. 10/11
Castilla y León	3.97	3.84	-3.30%

País Vasco	3.43	3.38	-1.50%
La Rioja	2.81	3.12	11.40%
Cataluña	2.44	2.42	-0.60%
Navarra	1.94	1.85	-4.60%
Aragón	1.89	1.76	-6.90%
Andalucía	2.04	1.46	-28.20%
Galicia	1.27%	1.42%	11.60%
Valencia	0.77	0.74	-4.40%
Castilla- La Mancha	0.46	0.47	2.60%
Extremadura	0.34	0.38	12.80%
Total	1.03	0.97	-6.10%

Source: OEMV

The internationalization process is a good indication of the cooperatives' growth. Seventy-five percent of cooperatives have been exporting their produce for less than 12 years, which means that they have been incorporated since the year 2000. Two thirds of these cooperatives sell their wine in international markets.

Figure 6. Wine cooperatives from Castilla-La Mancha that sell in exterior markets (2011)

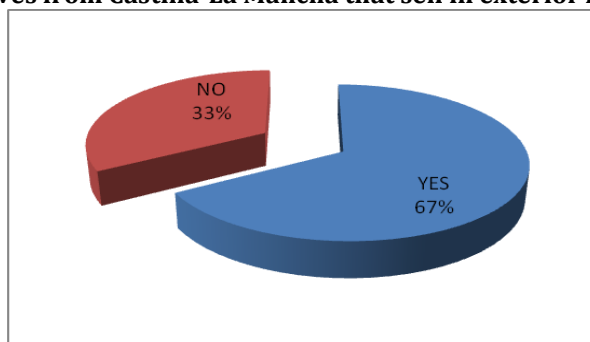
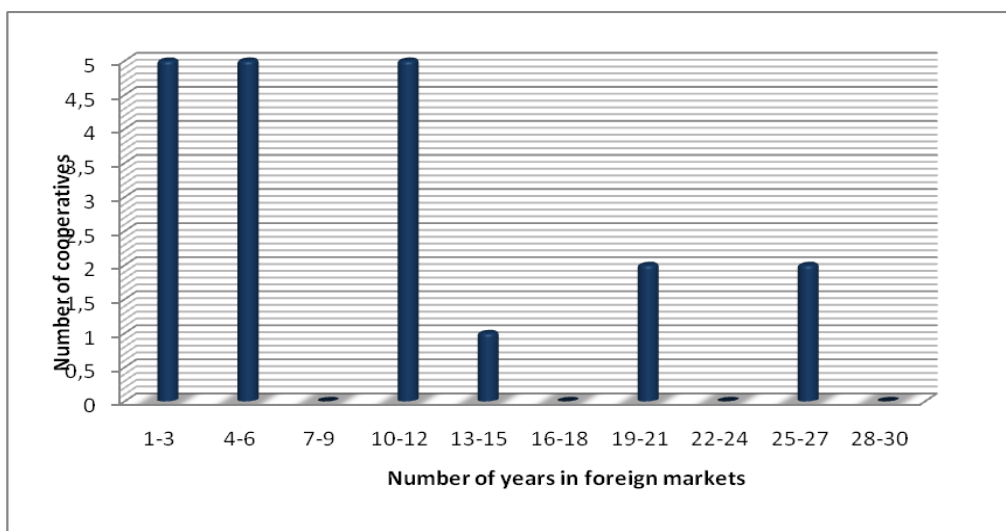


Figure 7. Number of years trading in foreign markets of interviewed exporting cooperatives (2011)

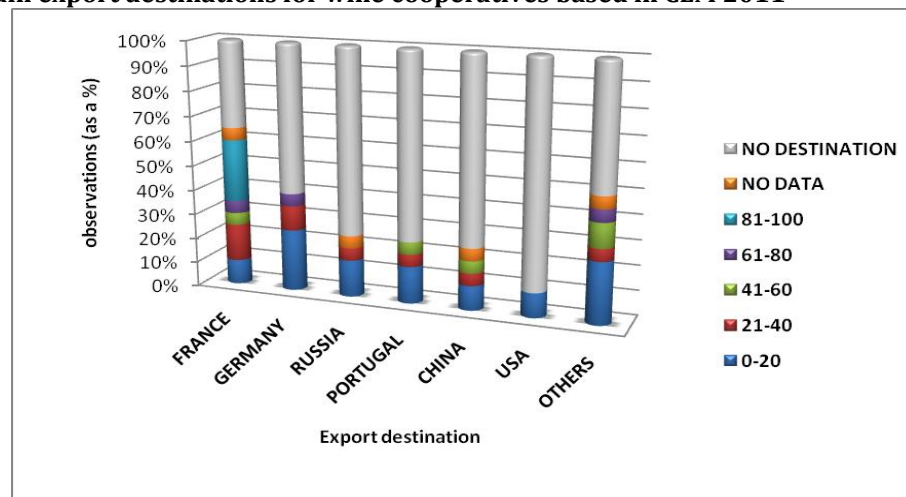


* The sum equals the number of exporting cooperatives: 20.

Destination markets for cooperatives' sales are mainly France (primarily due to its proximity to CLM), followed by Germany, which is a great potential market due to its size. Portugal follows in

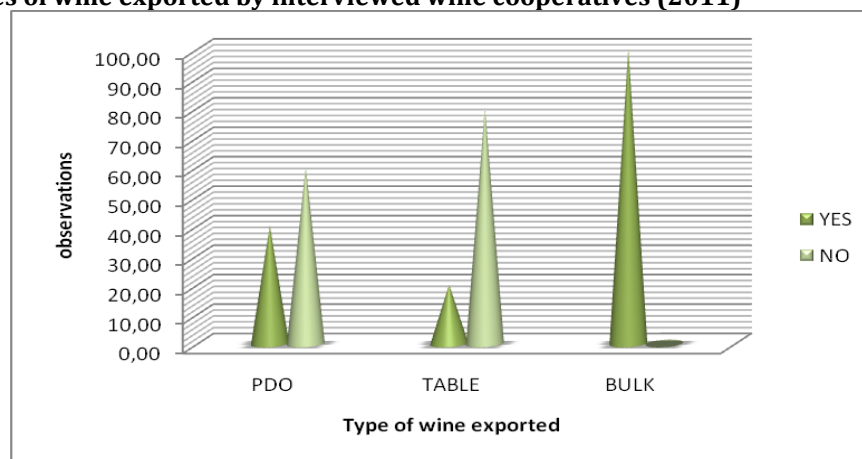
third place (border effect), Russia (one of the world's main bulk wine importers) and China (which is an emerging consumer market). The absence of the USA and the UK as high ranking potential markets is remarkable; despite being among the main wine importers, these markets import more bottled than bulk wine and pay some of the highest prices in the world market.

Figure 8. Main export destinations for wine cooperatives based in CLM 2011



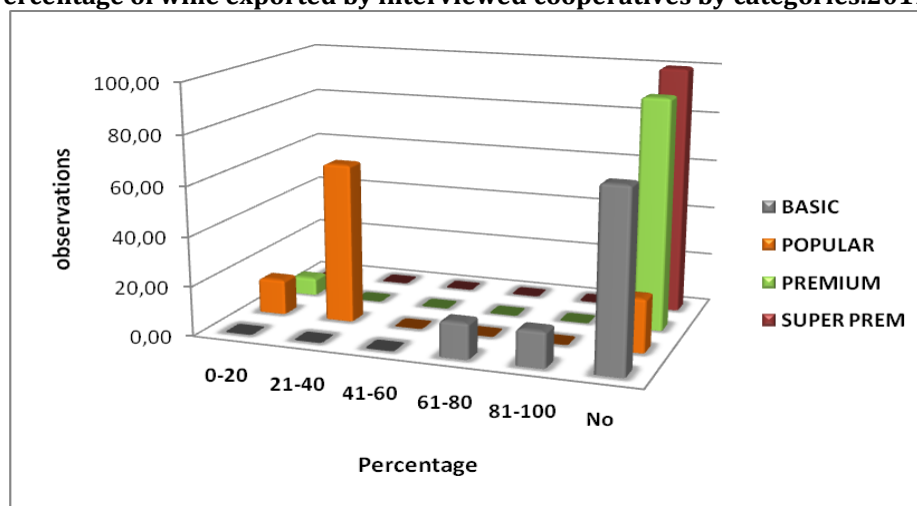
All of the interviewed cooperatives sell bulk wine to foreign markets. Sales of PDO and bottled table wines are considerably lower and have little influence on the economic results of cooperatives. Some cooperatives market and promote their own brand but this does not affect their quantitative results; it does however enhance their wines' image. This is because people associate bottled wine with a different type of brand. Nevertheless this does not change the fact that most wine is traded in bulk.

Figure 9. Types of wine exported by interviewed wine cooperatives (2011)



All of the cooperatives sell their wine in the most basic market segments. Yet, none of the cooperatives sell their wine in the super premium segment, perhaps this could explain why only 5% of their wine sells at a premium. The vast majority are targeted to the basic segment despite selling at the lowest prices.

Figure 10. Percentage of wine exported by interviewed cooperatives by categories. 2011



In 2011, (the last year where data was available), the soar of basis bulk wine prices led to a displacement of the bottling and package processes. This displacement even had an impact on wines with a quality statement of origin; due to a positive sales tendency at a higher price this rendered any promotional and commercial investments unnecessary.

Figure 11 Price development of red bulk wine in Castilla-La Mancha (2010-2011)

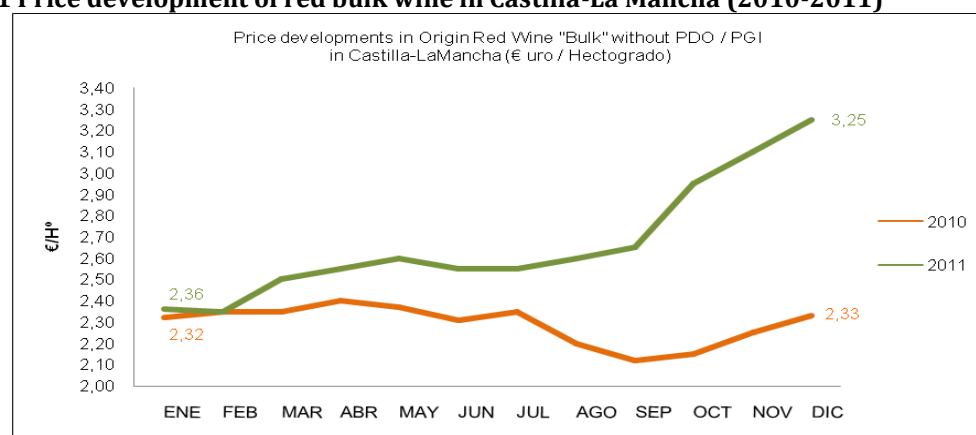


Figure 12. Price development of white bulk wine in Castilla-La Mancha (2010-2011)

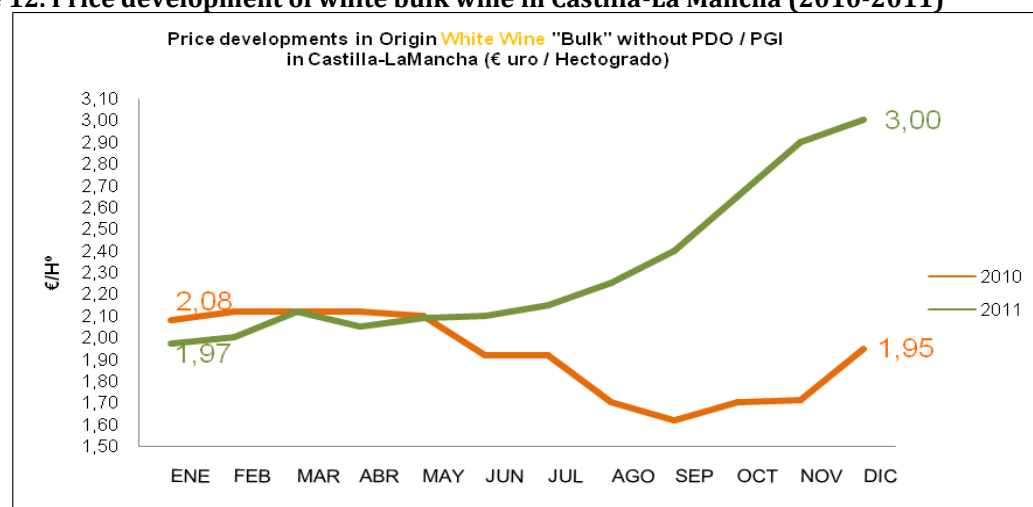


Table 22 – Main developments in the wine industry (2009)

	Employed persons	Gross margin	Turnover (million of Euros)
Spain	22,600	17	4,671
CLM	3,097	13	905.43
CLM Share (on total Spain)	17%	76.5%	19.4%

Source: SG Fomento industrial e innovación

Vertical integration

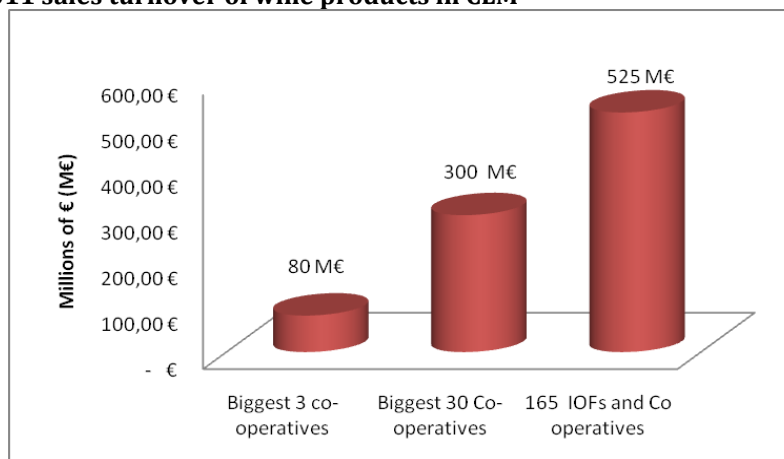
Broadly speaking, Castilla-La Mancha's wine cooperatives have a higher turnover than those of the rest of Spain (2.3 million Euros in the region versus a national average of 1.9 million Euros) and the average number of farmer-members is also significantly higher than in other regions of Spain (10%). According to the *Directorio de Cooperativas Agro-alimentarias*, eight second-tier wine cooperatives are based in CLM. Nevertheless, according to our own data, only two of them (Baco and Vialcon) are actively trading. The most successful second-tier cooperative, in Spain, is called Baco, and is detailed below.

Table 23 – Figures of cooperatives/ cooperative statistics (2010)

Region	Nº cooperatives and OIFs	Nº wine partners	Turnover (€)	Average partners/cooperatives	Average turnover Cooperatives, (€)	Nº Cooperatives 2º tier
CLM	254	92.554	574.753.738	364	2.262.810	8(2)
Spain	628	210.772	1.212.017.708	335	1.929.964	19 (13)
% CLM/Spain	40,45%	43,91%	47,42%	108,66%	117,25%	15,38%

Source: Cooperativas Agro-alimentarias 2010

Dissecting the cooperative's overall composition its wine sales turnover, we can how the top 30 of 254 cooperatives make 300 million Euros (this accounts for more than 50% of the total cooperative wine sales in Castilla-La Mancha).

Figure 13. The 2011 sales turnover of wine products in CLM

Source: Cooperativas agroalimentarias, Castilla- La Mancha

The strategy linked to horizontal and vertical integration emerged mainly from the need to cut structural costs, and not from the need to bottle and develop new products and implementing marketing plans. Processing was supported and given financial backing in the 1990s, by the regional government, and cooperatives. Still, despite being expected to invest in the commercial sector in the 2000s, cooperatives did not, due to: a) farmer-members lack of faith in the

commercial sector's investments because they were intangible b) the lack of liquidity and financial options caused by the former investments in the industrial sector. Basically, the commercial sector's investments were deemed less important because of the sales of cooperative's bulk wine through intermediaries.

The second-tier cooperative BACO

One of the last decade's integration experiments in Castilla-La Mancha, VIALCON, a second-tier cooperative formed by 12 first-tier cooperatives, has failed. In this cooperative, after some years of common sales, the 12 first-tier cooperatives have declined along with the overall commercialization of their product in the 2011-12 seasons. The fundamental reason as to why there is a cooperative crisis has been that joint storage of the product in order to further promote it through the second-tier cooperative is no longer necessary. The main causes of this crisis are related to cooperatives' governing strategies:

- a) first-tier cooperatives have competed with each other and with intermediaries in order to sell at the best prices.
- b) The Junta Rectora (or Governing Committees) local and personal gains and interests in first-tier cooperatives
- c) Cooperatives have postponed their integration and modernization processes and therefore, also, the improvement of commercial planning and quality control.

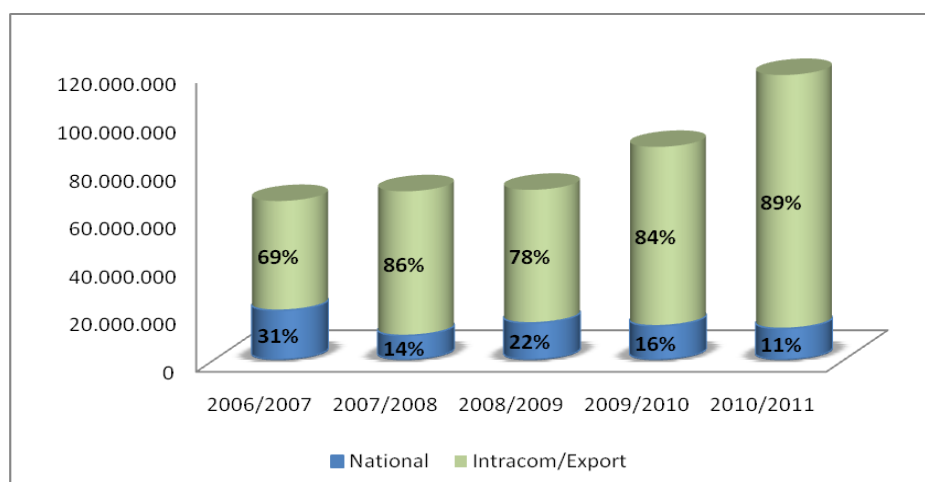
This second-tier cooperative had a marketing agreement with the French cooperative, (La Gardonenca), based in Languedoc-Roussillon, to further advertising by merging into a joint firm, "Gardovial", but this enterprise also failed after a short lapse of time due to similar governing problems and disagreements about the commercial strategy adopted. In the 1980s and 1990s similar integration processes also failed, e.g. Bodegas Unidas, in La Manchuela and Albacete, and UTECOS, in Cuenca and Ciudad Real. Nevertheless, a successful example of vertical integration is the second-tier cooperative BACO, which incorporates nine cooperatives and, in turn, 8,000 farmer-members and 35,000 hectares of vineyards. In the last five marketing campaigns, its sales and turnover have increased spectacularly and since 2008-09, has achieved a 100% sales record of the wine produced by its cooperative-members. Not only does it have an effective entering strategy for foreign markets, which account for 90% of the sales, but it also developed a bottling and branding activity in order to enhance product image, although the respective turnover accounts for only 2% of the total turnover. Its management of the integration is as follows: a) common marketing, b) single management of the group, c) integrated and single technical and commercial management, d) purchasing headquarters, and e) integrated financial and insurance management. At the moment, BACO is devising a strategy to become the exclusive wine supplier to large retail companies (Mercadona, Carrefour, Aldi, Lidl, etc), which would be a quantum leap in marketing.

Table 24.-Commercial development campaigns Baco

Campaign	Turnover (€)	Sales (litres)	Price (€/l)
2006/2007	25,163,737.40	65,984,549	0.38
2007/2008	29,182,406.16	70,029,184	0.42
2008/2009	24,780,032.22	70,641,649	0.35
2009/2010	28,034,154.30	88,530,874	0.32
2010/2011	40,059,091.22	118,490,313	0.34

Source: BACO

Figure 14. Commercial development of Baco's last five campaigns

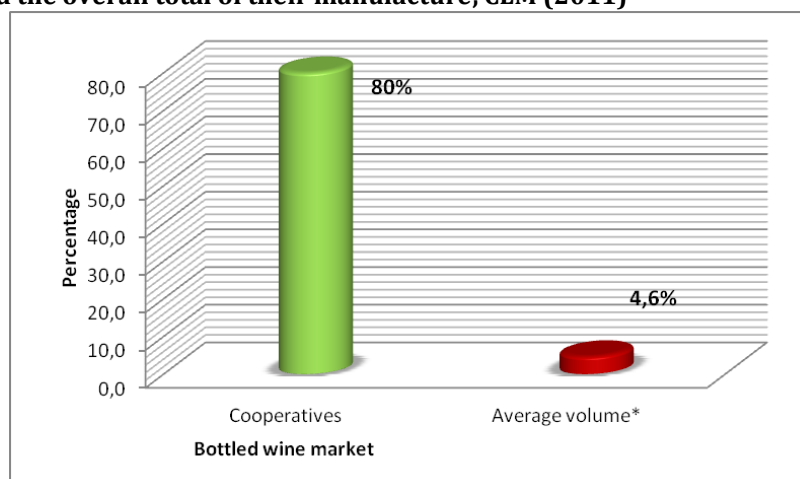


Source: BACO

Structural aspects.

The prevailing strategy for CLM's wine cooperatives during the last years has been internationalization and sales of bulk wine and must²⁷. They need liquidity to carry out these productive processes on their farms. However, the prices of grapes sold by cooperatives has been very low in order to competitively extend bulk wines sales to foreign markets thus affecting grower's liquidity.

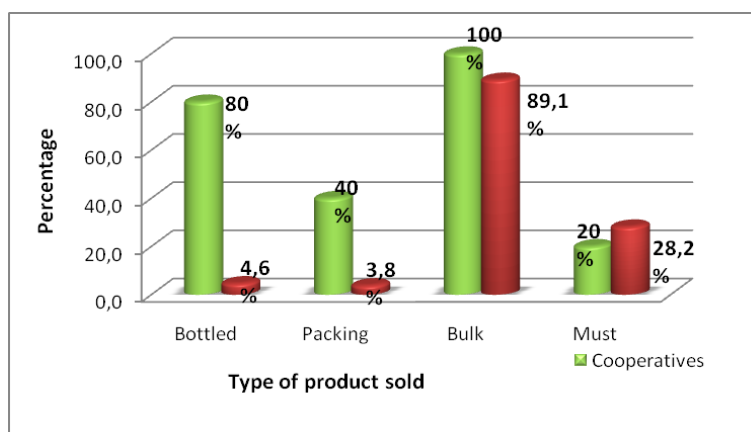
Figure 15. Percentage of cooperatives marketing their own brand. The percentage of sales of bottled wine and the overall total of their manufacture, CLM (2011)



As shown in figure 16, all of the sampled cooperatives sell bulk wine, which accounts for 89.1% of their total sales. Strangely enough, while 80% of the cooperatives have marketed bottled and branded wine, it only accounts for 4.6% of their total turnover. This means that the bottling and branding strategy may have greatly enhanced their marketing image but this has only had a relatively minor impact on their sales volume.

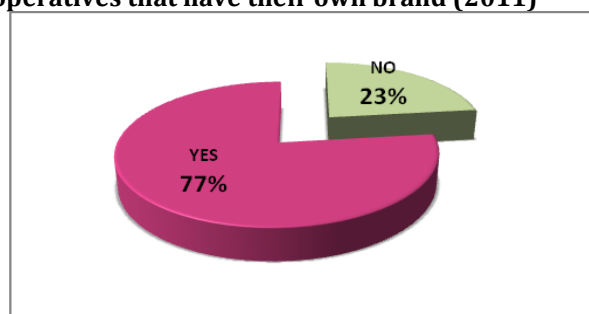
²⁷ The adoption of bottling and own brands has also expanded among co-operatives, but the final scale of sales has been small because they represent only a small share of the total sales and because the process needs an extension of the sales cycle and a capital investment that farmer-members cannot provide.

Figure 16. The percentage of cooperatives that commercialize each type of product and share of turnover in 2011.



*This percentage is the average turnover of firms that commercialize this type of product. (Therefore they do not sum 100)

Figure 17. CLM's wine cooperatives that have their own brand (2011)

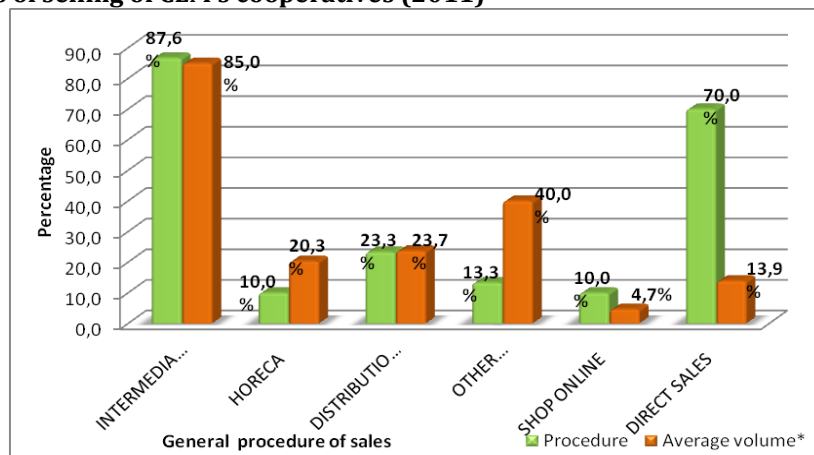


Marketing channels and wine sold by CLM's cooperatives have been designed with this situation in mind. Cooperatives are vulnerable to market conditions and behave as price-takers because they depend on intermediaries that buy directly from the cellars. Cooperatives that sell in the HORECA channel or that are directly related to commercial distribution channels represent in a minority. This issue has hindered their efforts to improve their position in the wine supply chain (figure 4).

Cooperatives are vulnerable to opportunism, because they depend on intermediaries to sell immediately and get cash to pay their advances and settlements to farmer-members (who, usually, own small farms and have other occupations) quickly.

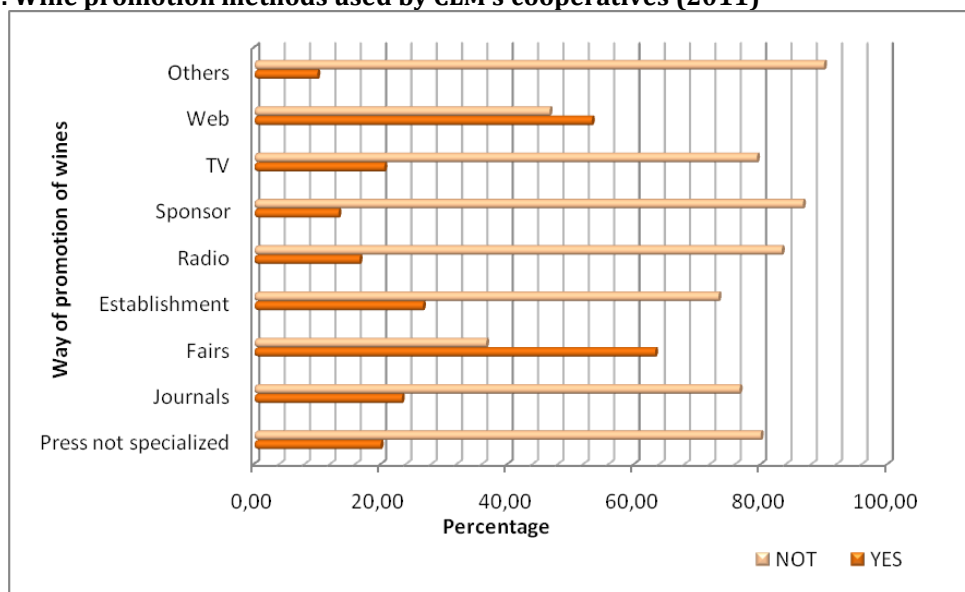
Credit sections that depend on cooperatives have almost disappeared. Only three rural, local, savings banks, which originally integrated credit sections in cooperatives, are left (Casas Ibáñez, Mota Del Cuervo and Villamalea). The merger of provincial rural savings banks partially explains this development. As a result, farmer-members are becoming increasingly dependent on advanced settlements due to their need for immediate liquidity instead of having to access credit.

Figure 18. Ways of selling of CLM's cooperatives (2011)



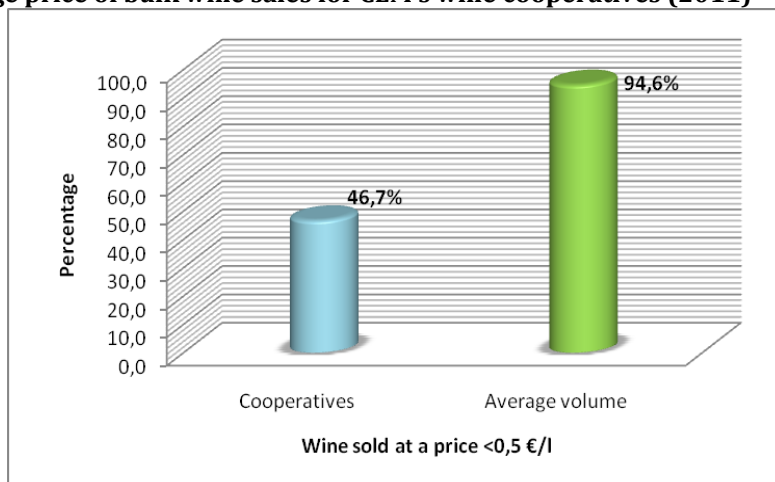
The only prevailing promotion channels used by actively promoting cooperatives are a) Assistance to fairs and, b) Web page availability (figure 5). This fact is related to the External Promotion Measure established in the wine CMO, and also linked to regional and national government incentives. This situation is also caused by the lack of powerful commercial department's presence and skilled sales staff.

Figure 19. Wine promotion methods used by CLM's cooperatives (2011)



Consequently, cooperatives have small margins of intermediation and create little added value. Most cooperatives are selling at the lowest unitary prices of the sector (and also the most competitive prices for internationalization). As seen in Figure 6, almost 50% of cooperatives sell nearly all their wine for less than 0.5 Euros per litre.

Figure 20. Average price of bulk wine sales for CLM's wine cooperatives (2011)

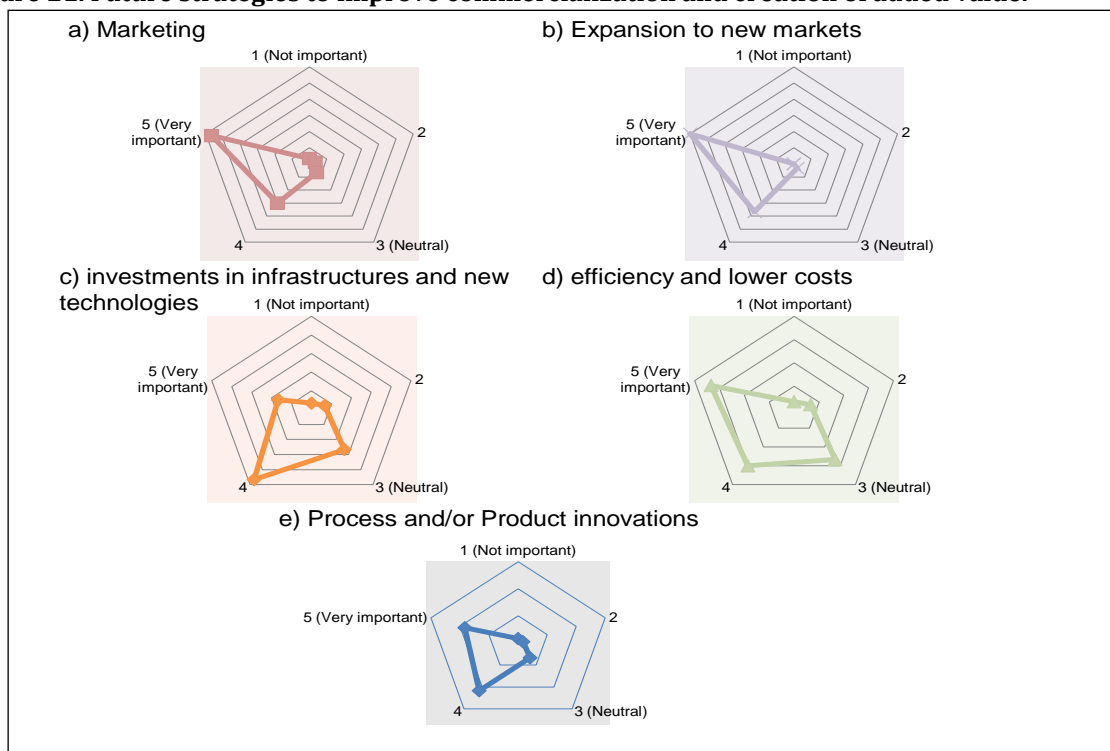


For cooperatives that sell in the 0.5-2 Euros price segment (a little bit more than 56% of cooperative sale in this segment) these kinds of sales (very low unitary value) accounts for only 68% of their total income.

Analysis on Future Strategies of Selected Cooperatives

When asked about their future strategies in order to improve their commercialization and creation of added value, interviewed cooperatives considered (1) marketing, and (b) expansion into new markets as their top priorities. They also considered investments in infrastructures and new technology, initiating efficiency improvements and reducing costs, and introducing process and/or product innovations.

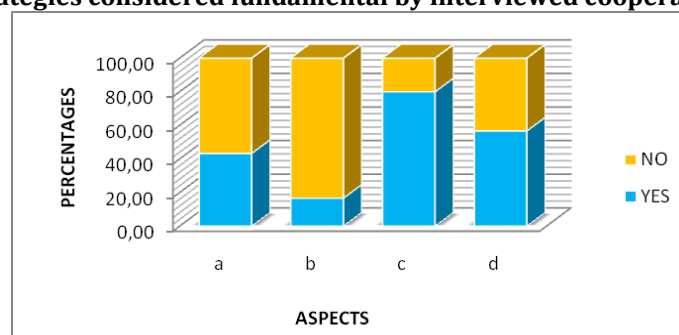
Figure 21. Future strategies to improve commercialization and creation of added value.



As seen in their responses and impressions, cooperatives clearly do not believe that the development of new products is necessary and prefer to focus on further quantitative expansion

rather than concentrate on improving the quality of their product to enter new markets and use new commercialization channels. Interviewed cooperatives consider investments in marketing activities vital. However, they have not yet decided on making such investments because of the lack of available credit and the fact that they are in debt.

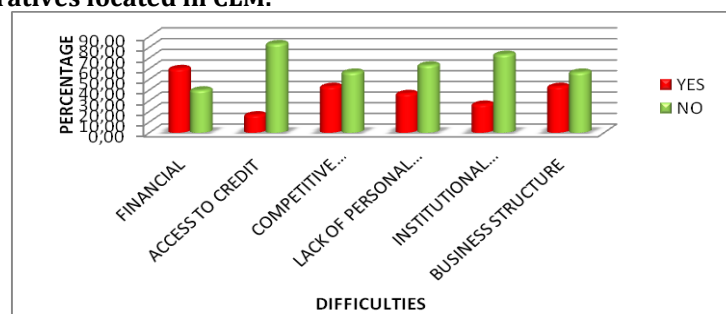
Figure 22. Future strategies considered fundamental by interviewed cooperatives



- a. Potentiating of existing products
- b. Development of new products
- c. Introduction in new markets
- d. New commercialization channels

According to the cooperatives interviewed, the bottlenecks (as previously mentioned above) are caused by the financial difficulties to realize investments. However, strangely enough the difficulty to access credit is not considered a significant constraint. The personnel bear in mind that they are able to undertake a commercial strategy. In addition to this, they also think that institutional support is sufficient. The regional government organizes and funds assistance to fairs and promotion in foreign markets. They consider the market's competitive edge as the main cause of the difficulties they face in commercializing their products.

Figure 23. Difficulties to develop marketing and commercialization strategies for the 31 interviewed cooperatives located in CLM.



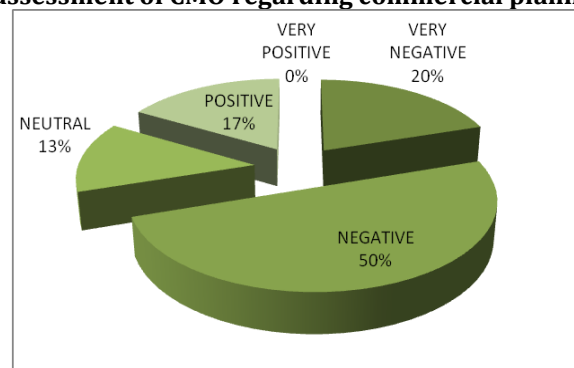
3.3 Relevant support measures

The Common Agricultural Policy in the wine sector in Castilla-La Mancha has converted this region into the main (sometimes even exclusive) implementation zone of community funds. The cooperatives of CLM were very dependent on distilleries (especially on potable alcohol distilleries) and have also been the main beneficiaries of funds intended to uproot vines (100,000 hectares have disappeared in recent years, but productive potential has remained intact thanks to measures taken to restructure and conserve of vineyards). The only case where CLM has not been the main beneficiary is in the measures taken to promote products to third countries (Table 25).

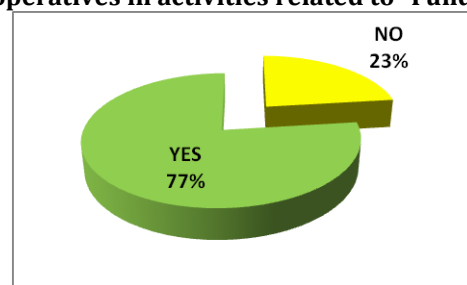
Table 25 –Budgetary payments received from wine CMO measures (Million Euros)

	CLM Annual average Campaigns 2009-2011	Spain Annual average Campaigns 2009-2011	CLM/ESP
1. Uprooting	127,019	169,771	75
2.1. Promotion to third countries	3,944	20,368	19
2.2. Restructuring and conversion	30,425	69,288	44
2.3. Investment in firms	0	0	-
2.4. Distillations	76,704	109,366	70%
2. TOTAL MEASURES NATIONAL SUPPORT PROGRAM	111,073	199,022	56%

Source: own elaboration with con FEAGA

Figure 24. Cooperatives' assessment of CMO regarding commercial planning

The CMO contributes a massive amount of community funding to Castilla-La Mancha, yet in spite of this it is the assessment of the community regulations through the operative CMO rules are considered as negative or even detrimental by 70% of the cooperatives. This is mainly due to the opposition to the disappearance of distilleries and the price drops that have coincided temporarily since 2008. It has already been stipulated that the 2008 measures taken by the CMO have, indirectly, led to the acceleration of internationalization over last years.

Figure 25. Participation of cooperatives in activities related to “Fundación Tierra de Viñedos”

In Castilla-La Mancha, a Regional Government initiative started a joint public-private institution, Fundación Tierra de Viñedos, to which wine cooperatives and IOFs had to pay an annual fee per processed litre of wine. Unfortunately, this institution did not produce good results, and therefore, disbanded in 2011.

3.4 Hypothesis testing

Analysis of the characteristics of wine firms in Castilla-La Mancha: Cooperatives versus IOFs.

In order to test the stated hypothesis with a high degree of confidence, it has been necessary to identify and study Castilla-La Mancha's wine firm's trends in order to effectively analyze their commercialization strategies, quantify the relationship between how much their competitive

rates have improved and in their surpluses. This would also involve effectively distinguishing between cooperatives' and IOFs' strategies.

Fifty-nine firms have been selected through a simple random sampling to measure the heterogeneity of the population. This is considered to be an adequate sample size to reach a confidence level of 95% and a margin of error of 0.1 for a total population of 600 wine IOFs and cooperatives.

Research results contrasting and comparing IOFs and cooperatives.

1. The size of the firm (in this case measured by the number of employees it has) is a separate issue irrespective of being IOF or cooperative. Though the largest IOFs are smaller than the largest cooperatives.
2. Despite the IOFs comparatively smaller size they generally have more commercial staff than cooperatives. The lack of direct commercialization and relationships with HORECA and various distribution channels is one of the biggest drains on cooperatives.
3. Cooperatives exclusively specialise in bulk wine, while IOFs spread their sales and distribution among both bulk and bottled wine.
4. IOFs trade a higher quality wine (PDO-PGI) while cooperatives trade general bulk and table wine.
5. Cooperatives have a general market price value below 5€/Litre. IOFs also normally have a general low market price value; however, they do also sell at some of their produce at a higher price. The adoption of both bottling and of own brand strategies have not been relevant to the cooperative sector in Castilla-La Mancha.
6. IOFs and cooperatives have equally experienced a high rate of internationalization and export most of their products.
7. IOFs dominate the US market, Where as cooperatives have a greater monopoly on the European Union's market. Any information about the Asian market remains unclear. France, Italy and Portugal's proximity is a deciding factor in cooperative's choice export destinations.

Qualitative resume with verification of stated hypothesis

Table 26 - Hypothesis testing on the wine cooperatives operating in Castilla-La Mancha

H0	Hypothesis Description	Hypothesis Testing*
8a	A higher degree of vertical integration of cooperatives in a sector is positively associated with higher producer income.	Hypothesis only partially supported. Vertical integration had successful and unsuccessful cases in the last decade, so the assessment is ambivalent. Minor integration experiences occurred, basically between two nearly located cooperatives of small dimension, to save structure costs shutting one of the transformation facilities. The predominance of bulk sales, dependent on conjuncture, has impeded to visualize the need of a higher vertical integration and the growers who are members of first-tier cooperatives have demanded immediate payments to have liquidity instead of investing in order to increase their revenue in the future through integration. Nevertheless, the experience of the largest second-tier cooperative in CLM has been illuminating and confirms that, when integration is successful, the hypothesis is true.
8b	The cooperative as an integrated processor develops better products and promotes them so effectively as to increase market demand.	Although strategies of brand development and bottling have been used, the holding of this hypothesis is stronger in qualitative aspects (image and quality improvements through changes) than in quantitative aspects, because the segments haven't been relevant compared with the total volume of sales. The integration experiences (in successful cases) have developed the quality and image of products, and have achieved a small added value and a better price than other basis cooperatives nearly located, but the price has responded to a greater extent to the general conjuncture of bulk wine market transactions.

10	Agricultural cooperatives that are successfully involved in selling final, consumer products, have a higher chance of adopting innovative ownership, governance, and capital acquisition methods.	Innovative advances in governance, capital investments and in development are related to larger cooperatives with economies of scale, more than to the existence of human capital and an entrepreneurial direction team.
15	Agricultural cooperatives which focus primarily on achieving social goals do worse, in terms of economic performance, than cooperatives which focus primarily on achieving economic goals.	This hypothesis may be seen as supported because all of the cooperatives focus their fundamental objectives in the economic aspect. The cooperatives and related entities that prioritize the achievement of social objectives have disappeared. Only the activities of the credit sections dependent on cooperatives and of rural savings banks allocate their surplus to social projects when a surplus derived from financial intermediation is produced.
17	The federated cooperative structure (more than one tiers) is less efficient than the centralized one (first-tier structure; farmers are directly members to the cooperative).	CLM is known for its second tier cooperative integration experiences, which have had diverse results: successful and positive in the case of BACO, failure in the case of VIALCON, and also former failures as BODEGAS UNIDAS or UTECO. Therefore it is not possible to conclude that integration is more efficient because local interests and management problems lead to few positive integration experiences in CLM. The successful cases of integration achieved a high degree of efficiency. Other means of collaboration among cooperatives have also had a positive influence on efficiency, i.e. creation of auxiliary services by the federation of cooperatives in CLM, Cooperativas Agroalimentarias de CLM, such as: insurances, advice, mediators, management. Nevertheless other experiences such as Fundación Tierras de Viñedos have questioned the efficiency advantages of federated structures.
18	Agricultural cooperatives which collaborate with other cooperatives or IOFs do better, in terms of economic performance and services provided to their members.	The collaboration process between cooperatives and IOFs has increased significantly in the last decade, but interests are still opposed. The main cause of collaborations has been the outflow of large quantities of transformed wine (large firms buy bulk wine directly from cooperatives in order to pack it or introduce it in distribution as generic brands). Combined sales strategies have been forced (especially red wine with white, which has less market potential because of its relative abundance in CLM; most of vineyards are Airén variety). In the last years the cooperation has been between cooperatives for promotion in third countries and in EU (especially for joint assistance to fairs).

3.5 Conclusions

In the last decade the strategy that has been applied by Castilla-La Mancha's wine sector has been supported for various reasons in three distinct ways:

- Cooperative's need for liquidity in order to stabilize their members and the immediate outflow of stocks, which will in turn liberate used storage. This factor has caused bulk wine sales to be a source of financial leverage to make the cooperatives work.
- Secondly, the marketing process which promotes bottled and branded wine has almost been stabilized, and has been focusing more on the quality of the products rather than specialising in mass production. The bottling and branding have provided an image of a higher quality to the product and set up a path for further promotion and marketing, yet they haven't had any real impact on quantitative terms because the volume of the sales has still not increased significantly.
- Finally, it is essential to be able to repay the investments made in the transformation and industrialization sectors. (Mainly for refrigeration and the most up to date metal storage

equipment). These huge investments involved large economic sums in all of the cooperatives, but they caused, in low price phases in the bulk wine market. Subsequently, the wine sector may have great difficulty in repaying loan and its fees (despite the Regional Government's generous support by funding these kinds of investments in significant percentages).

Due to these current factors, cooperatives have become dependent on large IOFS and distribution firms. IOFS have taken advantage of buying raw material and also large cellars from cooperatives to pack stock at very low prices and with high quality. In some distribution firm's cases, some of the big supermarkets have used cooperative wine to pack their generic brands. Collusive agreements of "pack sales" have also occurred, often combining red and white varieties rather than combining bulk and bottled wines.

Cooperative integration is overall very successful in Castilla-La Mancha, where big volume sales of bulk wine are the main focal point. The expansion of this commercial dynamism (aided by the boom of CLM's wines in the world market) is a good basis for cooperatives and their members as it has very positive aspects and strengthens the cooperative initiative.

Due to low grape prices, cooperatives have had to generate income and liquidity in order to pay their members in advance. This has led to short term needs which have prevailed over the necessary long-term strategies of modernization. However large-sized cooperatives (located in Mancha and Manchuela) have been able to make more investments and settle better and far-reaching strategies.

In this context, internationalization has been the defining and transcendental element. Over last years the Spanish wine market has been opened up and promoted on an international level to foreign markets. Consequently, CLM's cooperatives have been trading in the most important segment (in quantitative terms) of bulk wine. The commitment to internationalization has been the main base of the cooperative strategy for market performances. This includes maintaining and building upon relationships with neighbouring countries (especially France and Portugal, and, when bad harvests occur, Italy). The fact that those countries are the main importers of bulk wine has been a big impact on this process. Wines with PDO/PGI in Castilla-La Mancha have been secondary for this process, despite having extensive territories with PDO's such as "La Mancha" or "Valdepeñas". Even PDO/PGI bulk wines have been more important than bottled wines with this status. On the other hand, the quantity of bottled wines had a special incidence on image and quality aspects that had "drag effects" on outflow of large bulk wine volumes (helped by the most competitive price of world markets).

The future of cooperatives to some extent is very dependent upon the sales and trends of the bulk wine market. Currently, prices are being pulled upward due to the market boom. However, this business is risky and can involve an increase in unitary costs because of the rise in raw material prices for the bottled or packaged product. This in turn affects competition in these segments. Prices are internationally tightened due to factors like the proliferation of brands, international traders and the correlation between low price segments and volume.

On the other hand, the vulnerability of a high number of small cooperatives is going to force an immediate integration even on a small scale (depending on the proximity of municipalities) to save structural costs. Further risk lies in not anticipating a change of thought about modernization and governing strategies, or a change the dynamic of the high prices conjuncture, or an innovative and change to commercialization methods, especially when segmenting and diversifying products, mechanisms and destination markets.

The announcement of CMO Reform in 2008 (2008/479/EC) brought a first negative impact in CLM as effects resulting from the prohibition of distillation were not clear. However, actual effects have been expected to be an important incentive for cooperatives. Cooperatives have been forced to become internationalized: they have had to dispose of their large volumes of wine through bulk wine exports. Grubbing-up scheme was recognized of great acceptance, both from social and economic perspectives. This program has allowed to abandon vineyards with little or no profitability, besides older farmers can reach a reasonable and decent retirement age. On the other hand, the structural adjustment of limiting production has been less effective in CLM: there has been a parallel increase of the conversion to irrigation in vineyards. Such increase has maintained annual level of production over the past ten years.

To conclude, a transcendental change can be linked to the analysis of wine cooperative strategies over the last decade: a) the need to eliminate the risk of dependence on conjuncture and decrease vulnerability of cooperatives; b) the change of opinion regarding associative governance, that should be overseen by the essential, generational, replacement of personnel; c) the integration strategy must encompass a processes that focuses on the progress of commercialization and marketing in the highest segments. This was in fact recently announced by the national federation “Cooperativas Agroalimentarias”, creating a collective brand that represents both the image and values of cooperatives’ wines; d) it is vital that big cooperatives in CLM position themselves in a higher negotiation power level in the chain, against IOFS and also against large distribution firms; e) The public support of the new CAP must have an impact in a differentiated and strategic support for social economy; f) It is fundamental that cooperative take into account the need of complementary revenue channels for their members: Mediterranean diet, other healthy products (with lower alcohol content), wine tourism, etc.

4. Comparative Analysis

Both examined European regions – Veneto (Italy) and Castilla-La Mancha (Spain) – stand out for their importance within the Italian and Spanish wine industries, in terms of turnover (both at agricultural and manufacturing phases of the wine chain), vineyards area and production²⁸. However, there are some relevant differences between these two regions.

On one hand, the turnover of the Castilla-La Mancha wine industry is strictly tied to bulk wines' sales. At the same time, table wines prevail significantly over PDO/PGI wines. Consistently, the average price of Castilla-La Mancha wines is much lower than that of Spanish wines considered as a whole (less than half).

On the contrary, the Veneto wine industry represents one of the most (economically) developed region within the entire Italian wine sector; a large part of wines sold are bottled and several well-known Italian wine brands (high market segment products) are managed by Veneto wine firms. Moreover, Veneto is one of the Italian regions with the highest share of vineyard area aimed at PDO/PGI wines' production (95%, compared to 69% at national level).

The above mentioned differences could explain, at least partially, the different performance of Castilla-La Mancha and Veneto wine industries over the last decade.

Referring to the vineyards area, the trend shows a decrease of the European surface used for wine grape production over the last decade, also due to the vineyards grubbing-up scheme provided by the EU's Common Market Organization for wine²⁹. In order to remove the structural imbalance that existed on the market – the total production largely exceeded the demand –, this policy gave the producers the chance to leave the sector through grubbing-up grants (the participation to this scheme was voluntary). As a result, most of the grants provided by this policy: 1) went to producers who deemed the production conditions were not viable; 2) concerned non-competitive vineyards. In this context, the effect of the grubbing-up scheme on the vineyards area was different among European countries, mainly according to the capacity of farmers and manufacturers of the wine supply chain to add value to raw materials.

Focusing on the two case regions, Castilla-La Mancha has been one of the Spanish regions more affected by this policy: the total vineyard surface reduced by 20% from 2000 to 2009 and the share of Castilla-La Mancha on total Spanish vineyards area heavily decreased over the same period. Regarding production quantities, the performance of the Castilla-La Mancha wine industry has improved in the examined period, given that production was significantly supported by yields rising trend over the same years. In the meantime, vineyard area remained rather stable in Veneto, differently from other Italian regions, especially the south of Italy; as result the Veneto share on total Italian vineyards area increased over the last decade.

Other comparative considerations stand out. On one hand, farmers and manufacturers operating in the Veneto wine industry, over the last decade show better performance compared to the Italian sector as a whole. On the other hand, manufacturing turnover and wine production value achieved by Castilla-La Mancha seem affected by the volatility of wine grapes prices as well as by meteorological conditions. Obviously, the latter also affected Veneto firms but in this case a long term increasing trend is also evident, mainly due to the shifting of products marketed towards higher value added products.

²⁸ It should be underlined that these two examined regions, obviously, cannot be taken into consideration as representatives of the entire Italian and Spanish wine industries, due to the strong differences among regions (in terms of products marketed and structural characteristics of the wine industries) both in Italy and Spain.

²⁹ See Council Regulation (EC) No 479/2008.

The choice to analyze these two regions is also linked to the great role that farmer cooperatives play within the respective wine industries.

Both Veneto and Castilla-La Mancha farmer cooperatives operate in the manufacturing stage of the wine chain while their farmer-members are involved in vineyards management and wine grapes production. According to the above explained position in the food chain, Castilla-La Mancha and Veneto wine cooperatives account for, respectively, 60% and 47% of the respective entire manufacturing wine industries³⁰. These accomplishments make the importance of wine cooperatives in the two analyzed regions evident.

Also focusing on cooperative firms which operate in the wine industry, some differences between Castilla-La Mancha and Veneto should be pointed out.

Castilla-La Mancha wine cooperative movement consists of many small cooperatives. At the same time, although the number of wine cooperatives operating in Veneto is much lower (45 compared to 254 in Castilla-La Mancha) their overall turnover is greater than that achieved by Castilla-La Mancha wine cooperative as a whole (respectively, 890 million Euros and 574 million Euros). As result, the average economic size of Veneto wine cooperatives is exponentially higher than that of Castilla-La Mancha ones (respectively, 20 million Euros and 2 million Euros).

Apart from these differences between Castilla-La Mancha and Veneto wine cooperatives, economic size of cooperatives seems to be a key aspect in explaining cooperatives' performance in both regions³¹. Indeed, it seems to affect the bargaining power of cooperatives versus other firms of the wine chain (i.e. processing IOFs, intermediaries and retailers) as well as the capacity to invest in processing and marketing activities.

The comparative analysis of the performance of Castilla-La Mancha and Veneto wine cooperatives over the last decade cannot be separated by the general trend of the entire Castilla-La Mancha and Veneto wine industries.

For what concerns the Italian region, the market share of cooperatives seems to have slightly decreased over the last decade although, at the same time, their turnover increased significantly and constantly. This could be explained by the higher increase of IOFs' turnover over the same years.

On the contrary, the market share of wine cooperatives in Castilla-La Mancha grew significantly from 2000 to 2010; this performance is strictly linked to what happened in the latest years of the past decade (2009 and 2010). This happened despite the decrease of the Castilla-La Mancha wine cooperatives' turnover, given the stronger drop in IOFs trade. These data confirm the important role of cooperatives in guaranteeing marketing of raw materials delivered by farmer-members even during the economic crisis. On the other hand, the same data indicate the higher vulnerability of Castilla-La Mancha wine firms (cooperative and IOFs) in case of economic crisis, compared to the Veneto industry. To this regard, the type of product marketed could explain the greater difficulties of Castilla-La Mancha wine firms; in a negative economic scenario, raising competitive pressure from intermediaries and other firms of the wine chain especially affects semi-finished products, rather than final consumer products.

Besides the general characteristics and performance of Castilla-La Mancha and Veneto wine cooperatives, the main comparative evidence of the case study refers to wine cooperatives structural and strategy aspects as well as their impact on cooperatives performance. In

³⁰ Here, once again, it should be underline that these market shares have a purely indicative character, as these data are the result of a rough estimate.

³¹ Information gathered suggests that similar consideration could be extended to IOFs too.

particular, the analysis focused on the structural and strategic aspects mainly linked to the hypotheses stated in section 1: i.e. vertical integration, tier of the cooperatives and type of goal pursued.

Vertical Integration

The main structural/strategic aspect to be investigated is the vertical integration of cooperatives and its effect on the performance of wine cooperatives examined.

Referring to Castilla-La Mancha cooperatives, successful and unsuccessful cases of vertical integration occurred over the last decade. Alongside vertical integration experiences which guaranteed a value added increase as well as better prices to wine cooperatives, in many cases (especially in low price phases of bulk wine) investment on processing activities provoked great problems in assuming the repayment fees of loans, without a significant impact on the improvement of products markets.

Overall, investments in bottling capacity were widespread within Castilla-La Mancha wine cooperatives over the last decade, but the economic importance of bottled products remains more qualitative than quantitative. The bottling processes have provided a higher quality image to the product and a path for promotion and marketing, although they haven't had real incidence in quantitative terms because the volume of the sales had little significance. At the same time, the adoption of own brand strategy was not relevant.

As result, Castilla-La Mancha wine cooperatives, even today, are heavily focused on bulk sales and table wine, strongly dependent on conjuncture. In the meantime IOFs spread their sales and distribution among bulk and bottled wine and trade more quality wine (PDO-PGI) with superior prices. In this scenario, cooperatives are really dependent on big IOFS and distribution firms.

Shifting to Veneto wine cooperatives, the favourable impact of vertical integration on cooperatives' performance and development of better products became more evident. The 2000-2010 increase in turnover of Veneto wine cooperatives, considered as a whole, was significantly supported by investments in processing and marketing activities that led to a relevant shifting from bulk to bottled (and branded) wines. This process was really widespread and significant within the Veneto wine cooperative movement over the last decade and it has positively affected performance of cooperatives and consequently those of their farmer members.

Actually, turning towards higher value added products started in the past decades (initially especially by the largest wine cooperatives) and it heavily developed in the last decade in Veneto, but it is still ongoing and it will continue in coming years. However, it should be noted that shifting of cooperatives' focus from bulk to bottled/branded products over the last decade was surely more intense in Veneto compared to the rest of Italy (especially the south regions).

Despite of the above mentioned shift towards bottled wines, even today many Veneto wine cooperatives remain mainly focused on bulk wines (especially the smaller ones). As result, within the Veneto wine industry different types of cooperatives work in terms of vertical integration and products marketed. Alongside wine cooperatives still mainly marketing bulk wines to other cooperatives or IOFs, there are also cooperatives which integrate the entire supply chain including supply of bottled (and sometimes branded) wines directly to the market.

Comparing Veneto and Castilla-La Mancha wine cooperatives it is evident that the Veneto ones are surely more involved in processing and marketing higher value wines, thanks to the above mentioned investments in the downstream phases carried out over the last decades, especially the last.

In any case, taking a look at both Veneto and Castilla-La Mancha wine cooperatives, integration of the downstream (processing and marketing) activities of the wine chain seems to be affected by cooperatives' specificities and especially the higher complexity of their governance as well as traditional behaviour of farmer members.

To the latter regard, it is interesting to note that Veneto and Castilla-La Mancha wine cooperatives have in common the need of liquidity required to match the immediate payment demands of farmer members for raw materials delivered. This circumstance affects vertical integration investments, considering that the latter entail extension of the financial cycle of the cooperative and consequently the payment to the farmer members for wine grapes withdrawn. For these reasons, differently from what happens amongst IOFs (where almost all of them marketed only bottled wines), even today, many Veneto wine cooperatives keep a part of their activities focused on bulk wine, in order to get liquidity required to swiftly pay at least a part of wine grapes delivered by members. Thereby financial requirements of members seem to have hindered a complete shift towards bottled wines. In many cases this aspect was (partially or totally, depending on single cooperatives) overcome by arrangement changes in dealing with farmer members, as well as by capital acquisition methods (as we seen in section 2).

The same issue has had an even stronger impact on Castilla-La Mancha wine cooperatives. Here, the need of liquidity for cooperatives to match financial requirements of members hindered any significant shift towards bottling developments causing bulk wine sales to remain preponderant in almost all wine cooperatives. Summing up, the traditional demand of farmer members for immediate payments has impeded visualization of the need of a higher vertical integration in order to increase their competitive position and consequently future incomes.

However, the impact of higher complexity of cooperative governance on vertical integration development does not only involve the above mentioned issue concerning financial payments to members. In fact, more generally, in cooperative firms the shift towards higher value products usually requires a full objective sharing between cooperatives and their farmer members. This can also imply cultural development on farmer members' behaviour, economically speaking. This means that development of the cooperative along the downstream phases of the supply chain could require an agreement between cooperative management and farmer members in adopting innovative ownership, governance, and capital acquisition methods.

To this regard, some evidence comes from Veneto wine cooperatives.

On one hand, there have not been significant changes over the last decades for what concerns ownership governance; the latter remained almost stable both in cooperatives focused on bulk wines and those focused on final consumer products. On the other hand, agricultural cooperatives successfully involved in selling final products are often those that were more able to collect financial resources by members. As reported in section 2, capital required for cooperatives' development came from their members. This means that the collection of financial resources by Veneto wine cooperatives necessarily required a full sharing of objectives and development paths between cooperatives and their farmer members.

Moreover, it seems that the Veneto wine cooperatives more involved in selling final products have a higher chance of adopting a new arrangement dealing with farmer members. We refer to: 1) introduction of legal obligation to deliver all members' production; 2) introduction/strengthening of the link between prices paid to farmer-members quality of wine grapes delivered. In any case, it should be pointed out that it seems difficult to distinguish causes and effects of this relation. These arrangement changes surely have favoured the vertical integration of wine cooperatives and the quality improvement of their products (that also meant better prices and incomes for farmer members).

Shifting to Castilla-La Mancha cooperatives, information collected suggests that innovative advances in governance, capital investments and development are linked to the economic size of cooperatives. The quantitative analysis indicates a positive correlation between cooperatives' size and net sales, and between size and export performance. However, the hypothesis of larger cooperatives having better sales results can only be partially verified; large cooperatives with modernized plants and developed governance have faster procedures for large sales but are behind in diversification strategies and segmentation of bottled and branded wines' sales.

Even though it has not been taken into consideration by hypotheses stated in section 1, also horizontal integration seems to be a key point for the performance of cooperatives. Indeed, both Castilla-La Mancha and Veneto have experienced significant horizontal integration processes, by merger operations among cooperatives during the last decade. These strategic operations positively affected wine cooperatives operating in the two examined regions in terms of production costs reduction, accessing to new markets/channels, and (in some cases) increasing bargaining power versus retailers or IOFs.

A strategic aspect which could affect the vertical and horizontal integration of cooperatives refers to collaboration among cooperatives or between the latter and IOFs (especially the former type). To this regard, in both European regions collaboration among firms within the respective wine chains significantly increased over the last decade. However, the results of these collaborations were partially different in Veneto and in Castilla-La Mancha.

In both cases, collaborations among cooperatives result in their better economic performance, for instance in terms of accessing foreign markets (both in Veneto and Castilla-La Mancha), or extension of products marketed and improvement of processing and bottling plant efficiency (in Veneto).

Referring to stable collaborations between cooperatives and IOFs, instead, these had a different impact on cooperatives' performance in Castilla-La Mancha and in Veneto. To the former regard, these collaborations seem to be perceived negatively and as a forced strategic decision for cooperatives; indeed, the latter have to collaborate with IOFs (also in case of lowering price trend) in order to market big quantities of bulk wine which then have to be processed and bottled by IOFs. This critical circumstance involves some Veneto wine cooperatives too; however, in these cases policies aimed to stabilize relations among firms operating in different stages of the wine chains (such as the "supply chain contracts") financially supported these relations, in order to stabilize prices and quantities marketed among cooperatives and IOFs. In this scenario the impact of this type of collaboration resulted in favourable impacts on both cooperatives and IOFs. Moreover, it should be noted that in some cases collaborations among Veneto cooperatives and IOFs consisted of sharing companies in order to develop products (bottling wines), market segments (such as private label sales) or branded wines sales (concentrating brand policies and promotion activities in a specialized firm). In the latter case, these collaborations usually lead to better performance both in cooperatives and IOFs.

Second tier cooperatives

Information gathered on Castilla-La Mancha and Veneto wine cooperatives regarding the connection between the tier of the cooperative and its efficiency, does not provide to obtain clear evidence. General considerations on the efficiency of federated cooperatives, compared to the first tiers, cannot be done, given different performance of federated wine cooperatives emerged in the two case regions. The efficiency of first tier and federated cooperatives seems to be tied to several aspects, e.g. type of production, arrangement in dealing with farmer members, and membership structure.

Economic versus Social Goals

Due to the lack of wine cooperatives focusing on social goals both in Veneto and Castilla-La Mancha, it is not possible to verify if farmer cooperatives perform differently according to the type of goals pursued, i.e. economic *versus* social. Indeed, in these two regions all wine cooperatives focus their fundamental objectives on economic aims. However, disappearance of all the cooperatives that prioritized achievement of social objectives seems to indirectly confirm that this strategic focus constrains cooperative's ability to excel in terms of economic performance and thus survive in the long run.

Lastly, gathered information suggests another relevant issue for the development of Veneto and Castilla-La Mancha wine cooperatives, that is the internationalization. According to the products range, Castilla-La Mancha wine cooperatives export almost only bulk wine (mainly across European countries), whereas export of Veneto cooperatives mostly focuses on bottled wines. Over the last decade the export of cooperatives operating in these two regions significantly increased; in this scenario, sales in foreign countries have become even more important for marketing wine production. This happened in both Veneto but especially in Castilla-La Mancha where opening foreign markets became a great opportunity for wine cooperatives to market large quantities of wines. Castilla-La Mancha cooperatives have opened up to foreign markets on a higher scale than IOFs, whereas Veneto wine cooperatives took advantage of increasing foreign demand on lower scale compared to IOFs.

Strategic and structural aspects addressed above can be affected by national and European policies provided for wine cooperatives. Relevant support measures that benefited Castilla-La Mancha and Veneto wine cooperatives should be pointed out to this regard, as well as how they affected cooperatives operating in these two regions.

Vineyards uprooting program, encouraged by CMO funds, has involved the two examined regions and cooperatives operating within them differently. Indeed, its effect, in terms of decrease of the vineyards area, was much heavier in Castilla-La Mancha than in Veneto. The vineyards uprooting had a very important level in Castilla-La Mancha, although it was focused on the less productive vineyards, and has been compensated by the increased yields propitiated by the transformation into irrigated land, mostly funded by vineyard restructuring and conversion plans of CMO. For what concerns Veneto, instead, the extirpation of vineyards, promoted by the CMO, has not involved this region significantly, differently from other Italian regions (mainly the south of Italy) where wine quality is averagely lower.

Another policy, which heavily involved Castilla-La Mancha wine cooperatives, refers to the disappearance of distillations funds. On one hand, the latter increased risk and vulnerability of wine firms; on the other hand, disappearance of distillations provoked the incentive for internationalization and forced opening towards foreign markets, propitiating significant advances in competitiveness. Also many Veneto wine cooperatives benefited from distillation measures. However, almost all Veneto wine cooperatives seem to be aware that this policy could indirectly hinder development in focusing strategy on higher value added products.

At the same time, it seems that policies supporting vertical integration and the improvement of products and processes favoured mainly the Veneto wine cooperatives, given their stronger focus on the downstream phases of the wine chains (processing and marketing activities).

We especially refer to funds provided by EAFRD as well as CMO (Common Market Organization) subsidies for promotion in third countries.

Referring to the former support measure, European Agricultural Fund for Rural Development (EAFRD) significantly encouraged Veneto wine cooperatives to invest in processing and marketing activities. This supported the improvement of cooperatives' products and processes, with benefits to their income and consequently that of farmer members.

Although also Castilla-La Mancha wine cooperatives had access to Axis I EAFRD funds, CMO measures for promotion on third-country markets were more important. Support measures for investment have been implemented since 2009 even though cooperatives benefited from other funds of former CMO measures.

CMO subsidies for promotion in third countries surely prompted many wine cooperative to try to export their wines outside Europe, both in Castilla-La Mancha and in Veneto. In particular, these funds allowed Castilla-La Mancha cooperatives to market bulk wines abroad, whereas Veneto cooperatives benefited from CMO funds for promotion to market almost only bottled wines. In any case, CMO Regulation supports wine cooperatives operating in both these regions to broaden their presence on foreign markets; to this regard it should be noted that cooperatives which have access to this support measure are increasing over the years.

5. Discussion

The figures and quantitative analysis show that the wine cooperatives in Veneto and Castilla-La Mancha have an important grip on a large share of the national wine industry. This is because the cooperatives are dynamic regarding competitiveness on an international level and they have a great ability to adapt to changing circumstances. The analyzed facts over last decades show that cooperatives are a viable option as they work as a productive organization in the present economic climate. This current economic climate can be distinguished from others because of certain defining characteristics such as: globalization, commercialization complexity, the significance of international activity, the use of technology that requires investment, and the need to expand the scale of production according to changing demands.

The main difference between the actions of a cooperative versus an IOF is their peculiar relationship with the member. As shown in the two examined regions, cooperatives give their members the assurance of being a strong and proactive group. Farmer cooperatives: 1) guarantee marketing of the entire agricultural production delivered by their farmer members; 2) concentrate the supply of agricultural products of farmer members in order to raise their bargaining power vis-à-vis retailers and processing IOFs, as well as to improve their cost efficiency; 3) integrate the downstream processing and marketing activities in order to add value to raw materials delivered by members. Summing up, the ultimate objective of cooperatives is to maximize the settlements of members and to guarantee market placement of their agricultural production.

At the same time, in a cooperative firm, the decision making process is complex, the risk aversion is high, and cooperatives need to obtain liquidity to periodically pay for the raw materials.

Given that owners (and shareholders) of cooperatives are growers, farmer cooperatives traditionally tend to act with a short-run view, aimed specifically for the needs of their farms. This fact is also applicable to the governing council of cooperative, resulting in a decision making process sensitive to the requirements and problems of members, while other cooperative firm needs are secondary. This characteristic is the main hallmark of the cooperative firm; i.e., on one hand, there is an advantage as it enables farmers to survive in harsh economic conditions and maintain their link with rural development. On the other hand, theoretically, the same features could affect the cooperatives' competitiveness, given that defining of development strategy of a cooperative firm implies full involvement of their farmer members who are historically not very prone to long run strategy.

In this report the evolution of the traditional concept of farmer cooperative is highlighted. In broad terms a cooperative is a union of farmers that receive and process grapes. These farmers are not supposed set out to take advantage of these benefits, but aim to sell their produce avoiding risks by using a little business initiative and savvy. However, this has now become an old concept and is slowly disappearing. Gradually the cooperative is re-establishing itself, with a more entrepreneurial spirit, pursuing the creation of added value, aiming to explore new markets and to diversify the products in order to carry out strategies that increase the profits.

Wine cooperatives based in Veneto and Castilla-La Mancha have placed wine in a direct and active market position by using commercialization and processing and distribution maneuvers that are adjusted according to the achievements of certain scales of production and productivity. Each region has implemented various different strategies.

In Castilla-La Mancha and Veneto both horizontal and vertical integration are predominant factors, although the results are more clear in the Italian region. Obviously, the adoption,

diffusion and evolution of integration processes are all affected by the geography of the region, the size of farms and cooperatives, the type of product (e.g. table wines vs. quality wines) and other features.

Most of the cooperatives based in Castilla-La Mancha base their chain value on making bulk wine and selling it. Cooperatives based in Veneto often include the bottling process in their productive cycle of producing wine. Therefore, the main objective of integration in Castilla-La Mancha is, mainly, saving on structural costs, maximizing the settlement of the raw materials on members and exporting large volumes of bulk wine. In Veneto, the strategy pursued by wine cooperatives is mainly to add value to raw materials delivered by their farmer members and to improve negotiation power of producers versus retailers, through relevant investments in the processing and marketing activities (bottling and sometimes branding strategies).

As long as firms share objectives and have compatible business models, strategic alliances will continue to be very important in globalized and competitive markets.

Focusing on the two case regions, collaborations were set up mainly among farmer cooperatives themselves. The strongest collaborations result in setting up second tier cooperatives or merger operations among cooperatives in order to face new challenges. Historically, cooperative models from Mediterranean countries (of any agri-food sector), including Italy, Spain and Greece, show that fusion might be difficult because of the local roots and spatial dispersion. Differently, the Nordic or Continental model (Denmark, Holland, Sweden, Finland or Ireland) is characterized by integration through fusions. However, as shown in the report, in the last decade mergers amongst farmer cooperatives have increased significantly also in the Mediterranean countries (especially in Italy and in particular in Veneto) as a reaction to the even stronger competitive pressure.

The study highlights that setting up second tier cooperatives and merger operations allowed horizontal and vertical integration (especially the former type) of CLM and Veneto cooperatives; both these strategies supported the performance of wine cooperatives operating in these two regions because of their favorable impact in terms of saving cost and improving in the commercialization phase on the one hand (horizontal integration), and improvement of product marketed on the other one (vertical integration).

Other strategic options have been pursued over the last years by wine cooperatives based on analyzed territories, although they appear less significant. These are:

- collaborations and alliances between cooperatives and IOFs for specific purposes, such as designing marketing strategies or brands, assisting to international fairs, promoting or developing products, etc. To this regard, even though these processes have increased substantially in the last ten years, in many cases interests of cooperatives and IOFs remain mainly opposed; often these collaborations refer to the cooperative supply of bulk wine to bottling by IOFs). In these cases, collaborations among cooperatives and IOFs could be favored by support measures aimed to set up stable collaboration among firms operating along the supply chain. Moreover, the assessment of the impact of collaborations between cooperatives and IOFs seem to be strictly linked to the competitive position of firms involved in the alliance. Where wine cooperatives had a lead role in setting up these collaboration (for instance in case of sharing companies together with IOFs, as seen in Veneto) the impact of these collaborations become very favorable for them.
- The set up of a benchmarking organization to improve the general management of the firms, especially in administrative, commercial and financial aspects. The improvement of the latter is largely achieved (especially in Spain's case) thanks to the actions of

federations of agri-food cooperatives. The advantages, in terms of efficiency and of federative structures are proved in the phase of providing services, eliminating barriers which now enable further financial investments and encourage wine cooperatives to face new challenges. This also helps modernize the structure of first-tier and minor (regarding levels of production and trade) cooperatives.

For what concerns policies, their impact on Castilla-La Mancha and Veneto wine cooperatives seems to be strictly tied to the type of products marketed. Castilla-La Mancha, where wine cooperatives focus on bulk wine, has been heavily involved by CMO uprooting program. Furthermore, wine cooperatives significantly benefited from distillations policy; its disappearance provoked big problems to wine cooperatives in the short run, although this change in policy has been a strong incentive to expand sales in foreign market. In the meantime, Veneto wine cooperatives mainly benefited from policies aimed to strengthen their position in the downstream phases of the wine supply chain (i.e. EADFR funds). This is consistent with the relevant investments they have made in the processing and marketing activities over the last decade. Overall, the collected information shows that the shifting of the policy strategic focus, occurred over the last decade, from production (by distillation funds) to market (by EADFR and CMO for promotion in third countries funds) have forced Veneto and Castilla-La Mancha wine cooperatives to strengthen their efforts to improve their competitiveness in the supply chain and exterior markets.

This comparative case study of wine cooperatives based in Veneto and Castilla-La Mancha proves that cooperatives are dynamic entities. This case study also demonstrates that wine cooperatives have the ability to adapt and respond to new challenges. Cooperatives are also necessary to take producers' efficiency and negotiation power to a level they could not reach alone, and to strengthen the productive network in rural cores, in both the largest cores and the less favoured areas.

6. Conclusions

Veneto and Castilla-La Mancha stand out for the relevance of their wine industries and especially for the role of the farmer cooperatives played within them.

The study shows, first of all, that Castilla-La Mancha and Veneto wine cooperatives continue to be characterized by a strong cooperative spirit as suggested by a lot of evidence, among which: farmer members provide most of capital investments required by the cooperative development; the cooperatives are exclusively owned and governed by farmers; any innovation and strategic decision of the cooperative is always fully shared by farmers; wine cooperatives market all raw materials delivered by members. Summing up, even nowadays they are traditional cooperatives, strictly tied to the need of farmer members.

Gathered information makes it clear that these farmer cooperatives operate for the benefit of their members. Development of Castilla-La Mancha and Veneto wine cooperatives has supported farmer members and their competitive position in the supply chain over the last decade, although the economic environment is become even more competitive.

The development of wine cooperatives operating in these two regions was possible mainly due to investments and strategic options aimed to increase their horizontal and vertical integration. As reported in the study, these cooperatives guaranteed the integration/strengthening of the processing and marketing phases of the supply chain, which could not be integrated by each single farmer, given the high fragmentation of production among many small firms. In the current economic scenario, these structural and strategic developments (i.e. horizontal and vertical integration) seem to be the only way to capture as much value along the wine supply chain.

The main strategies pursued by wine cooperatives operating in the two case regions were different. The main goal of integration in Castilla-La Mancha was saving on structural costs and exporting large volumes of bulk wine. Instead, Veneto wine cooperatives focused their efforts first of all on the processing activities in order to shift their product range from bulk to bottled wine, so to add value to raw material delivered by members.

The achievement of these strategic goals over the last decade proves that both Castilla-La Mancha and Veneto cooperatives successfully tried to adapt and respond to the market competition arena, in order to improve their competitive position and consequently that of their farmer members. Besides the strategies adopted in the two regions, development achieved by wine cooperatives seems to have enabled them to improve their capacity to guarantee and raise the settlements to farmer members in the long term. However, despite the above mentioned results of Castilla-La Mancha and Veneto wine cooperatives, the bargaining power of bottling IOFs and retailers remains a big problem, especially for cooperatives which were not able to significantly improve the range of products marketed.

Alongside the above mentioned accomplishments, the study also highlights the complexity of adopting structural and strategic changes by Castilla-La Mancha and Veneto wine cooperatives, mainly due to their governance specificities. Indeed, the cooperative governance is surely more complex compared to that of IOFs and it can partially affect development path and efficiency of the cooperative.

Being prone to meeting the needs of farmer members can also mean taking in great consideration their resistance to the changes required by the development strategy. To this regard, it is interesting to note that the demands of immediate payment by farmer members seem to be one of the key factors which hindered: 1) a complete shift toward bottled wines in

Veneto and 2) any relevant shift from bulk to bottled wines in Castilla-La Mancha. Similar constraints can also affect strategies aimed to strengthen horizontal integration; i.e. in the two examined regions, merger operations among cooperatives historically found a lot of cultural resistance in their members' behaviour.

During the life of traditional farmer cooperatives, no relevant strategic and structural changes can be undertaken without sharing objectives and strategies between the cooperative and its farmer members. The vertical/horizontal integration of the cooperative often implies collection of new capital from members, as well as changes in dealing aspects of the relation with farmer members (e.g. in terms of quality of agricultural product delivered or regarding terms of payments). In short, usually development of owned-farm cooperatives also implies evolution of the business culture and the agricultural activities of farmer members, given the historical aversion towards risk and the lack of business culture which traditionally mark farmers' behaviour.

Overall, the case study shows that farmer cooperatives are able to adapt their structural and strategic features without losing their traditionally tight connection with farmer members. This is possible by the farmer members' full involvement in defining of strategies and objectives of the cooperative. To this regard, information collected in the report suggests farmer members' growing awareness regarding the necessity of adopting structural and strategic changes in cooperative firms of both case regions, although this evidence stands out more clearly in the Italian one.

The case study also suggests that the tight connection between cooperatives and their farmer members cannot be seen only as a potential constrain to strategic and structural development of farmer cooperatives. On the contrary, if well managed, it becomes an opportunity.

Strategic and structural changes in agricultural cooperatives direct farmers towards the modernization and the efficiency of their agricultural activities in order to respond to the cooperative's requirements. In other words, owned farmer cooperatives could be seen as a key instrument to stimulate the business culture of farmers and the competitiveness of the agricultural sector. Farmer cooperatives are the main communication channel between changes in competitive environment and the agricultural sector, which traditionally are not much prone to changes and risk.

Summarizing, this study confirms the key role played by farmer cooperatives within the agricultural sector. Cooperatives are one of the few available instruments to farmers in order to integrate the activities of the supply chain that guarantee value and income and thus the improvement of their competitive position in the long term. Furthermore, they transfer the requirements of the market to farmer members, prompting them to a higher efficiency of their agricultural activity.

For these reasons, farmer cooperatives should be put at the core of the agricultural policy. Over the last decade, support measures surely have contributed to development of wine cooperatives based on the two case regions, especially after the gradual shift of their focus on promotion and processing investment (EADFR and CMO for promotion in third countries funds). The latter support measures seem to be consistent with the future challenges of the wine industry. Moreover, these policies could support wine cooperatives in persuading their member bases about the need of further investments on horizontal and vertical integration, in order to avoid/limit future risks for farmers, such as volatility of prices and dependence on conjuncture or the bargaining power of processing IOFs and retailers.

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Appendix I- List of Measures per Hypothesis

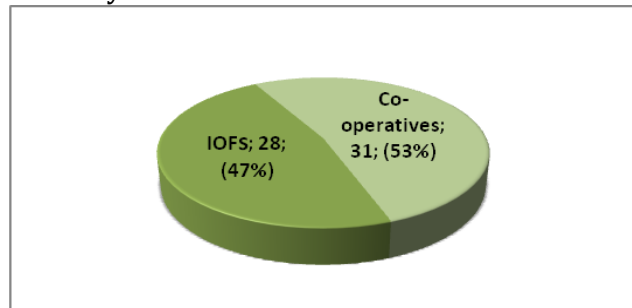
Hypothesis	Hypothesis Description	Measures dependent variable*	Measure independent variable
8a	A higher degree of vertical integration of cooperatives in a sector is positively associated with higher producer income.	Producer income. Financial and profitability measures (combination of: return on sales, economic returns and returns on equity).	Degree of vertical integration
8b	The cooperative as an integrated processor develops better products and promotes them so effectively as to increase market demand.	Weight of high quality segment products on total cooperatives turnover. Number of high quality segment products launched. Quality product indicators (quality wine sales/ bottled wines). Commercial resources (Commercial efforts factor and capabilities of employees).	Degree of vertical integration
10	Agricultural cooperatives that are successfully involved in selling final, consumer products, have a higher chance of adopting innovative ownership, governance, and capital acquisition methods.	Innovative ownership, governance and capital acquisition methods. Innovative methods to arrange dealing of relations with farmer members.	Successfully selling final, consumer products
15	Agricultural cooperatives which focus primarily on achieving social goals do worse, in terms of economic performance, than cooperatives which focus primarily on achieving economic goals.	Market share.	Focus on social goals
17	The federated cooperative structure (more than one tiers) is less efficient than the centralized one (one tier structure; farmers are directly members to the cooperative).	Income and turnover trend Governance issues and impact on cooperative's performance.	Centralization
18	Agricultural cooperatives which collaborate with other cooperatives or IOFs do better, in terms of economic performance and services provided to their members.	Turnover trend. Stabilization of prices and incomes. Cost efficiency. Range of products marketed. Economic Returns. Commercialized products prices.	Collaboration with other cooperatives or IOFs

* In order to test the hypotheses stated in section 1, different measures of dependent variables have been used, according to quantitative or qualitative information gathered on Italian and Spanish cooperatives examined.

Appendix II- Quantitative analysis of CLM

The 59 questionnaires were answered by 28 IOFs and 31 cooperatives:

Figure 26. Types of Firms Surveyed

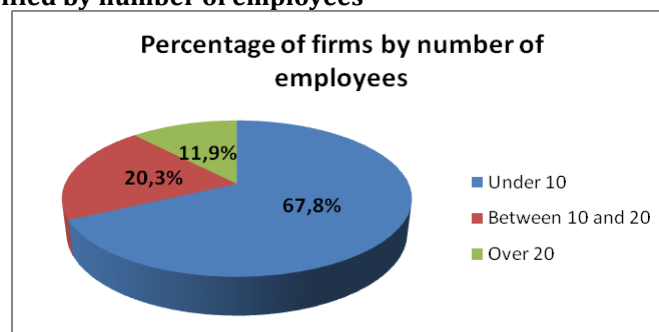


Bi-dimensional Contingency Tables have been used to establish the differences between both. In social sciences it is common to use cross tabulation of data when, in addition to describe, it's necessary to compare. Contingency tables are especially suggested by empirical scholars when nominal or qualitative variables are analyzed. The interest in contingency tables analysis is to resume the information included in the table measuring the association between the two variables that shape the table, but never the relation among the variable categories. We are going to obtain one or more numbers (statistics) to resume the informative content gathered in each of the cells which are derived from crossing the variables. Finally, once determined the degree of association between variables, we need to assess if it is statistically significant with the statistic Phi and Cramer's V. the results of the contingency tables are presented in Appendix II.

a) Type of firms and size

The firms of Castilla-La Mancha have a relatively low size, in terms of number of employees. According to the classification of firms of the European Commission, 68% of IOFs and cooperatives in Castilla-La Mancha are considered micro-firms because they have less than 10 employees, and the remaining 32% are small firms because their number of employees does not exceed 50. The graphical representation is:

Figure 27. Firms classified by number of employees



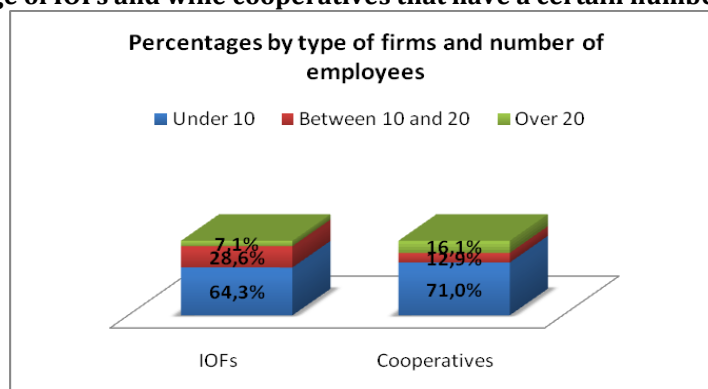
Differentiating between IOFs and cooperatives the distribution is the same, as shown in their contingency table:

Table 27. Type of firm and size of firm. Cross-tabulation.

			Size of firm (number of employees)			Total
			Under 10	Between 10-20	Over 20	
Type of Firm	IOFs	Count	18	8	2	28
		% within firm type	64.3%	28.6%	7.1%	100.0%
	COOPERATIVES	Count	22	4	5	31
		% within firm type	71.0%	12.9%	16.1%	100.0%
Total	Count		40	12	7	59
	% within firm type		67.8%	20.3%	11.9%	100.0%

The graphical representation of the relation between the variables is:

Figure 28 Percentage of IOFs and wine cooperatives that have a certain number of employees



To measure the significance of association among the variables, the Phi and Cramer's V coefficients with a value of 0.221 and a significance level of 0.05 prove the absence of association between variables. In other words, the number of employees of a wine firm is independent from its condition of IOF or cooperative.

Table 28. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.221	.238
	Cramer's V	.221	.238
N of Valid Cases		59	

b) Type of firms and employees in the commercial area

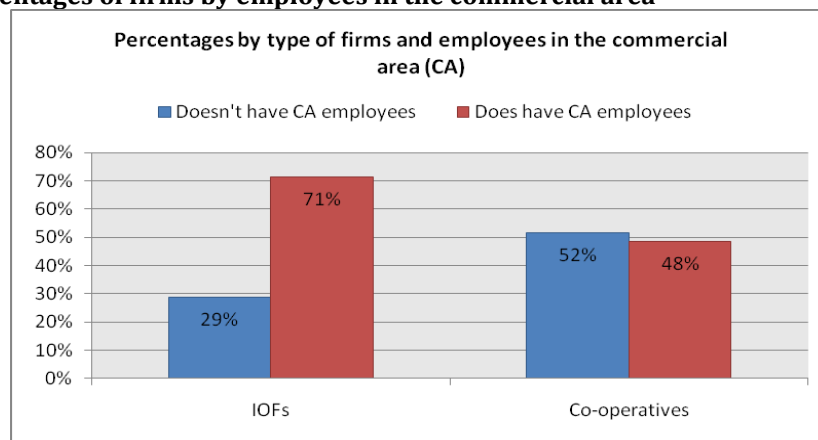
Comparing the type of firm with the hired staff in the commercial area, the IOFs surpass cooperatives in having this kind of employees. This fact is shown in the contingency table:

Table 29. Type of firm and commercial area employees. Cross-tabulation.

			Commercial area		Total
			Does not have	Does have	
Type of firm	IOFS	Count	8	20	28
		% within firm type	28.6%	71.4%	100%
	COOPERATIVES	Count	16	15	31
		% within firm type	51.6%	48.4%	100%
Total		Count	24	35	59
		% within firm type	40.7%	59.3%	100%

The graphical representation of these percentages is following:

Figure 29. Percentages of firms by employees in the commercial area



Phi and Cramer's V coefficients show the existence of association between variables at a significance level of 0.07. Namely, the IOFs allocate more human resources to the commercial areas than cooperatives.

Table 30. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.234	.072
	Cramer's V	.234	.072
N of Valid Cases		59	

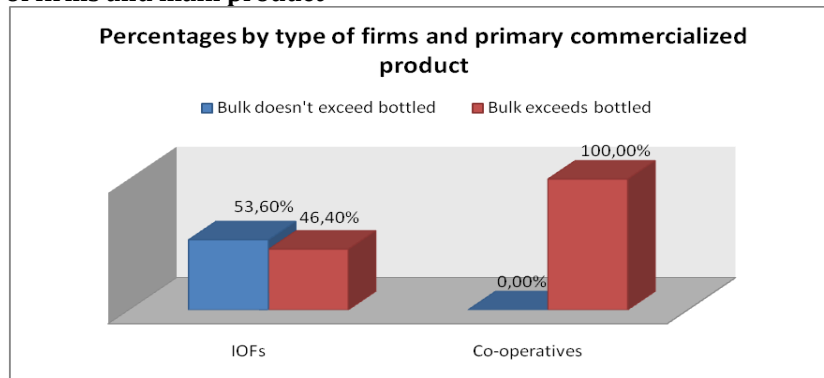
c) Type of firms and commercialized product: bulk-bottled

For a 74.6% of surveyed firms the bulk wine trade overcomes the bottled wine trade. By type of firms, the IOFs trade both bulk and bottled wine. On the other hand, for all of the cooperatives the trade with bulk wine overcomes the trade with bottled wine, as seen in the contingency table:

Table 31. Type of firm and commercialized product. Cross-tabulation.

			Product		Total
			Bulk does not surpass bottled	Bulk surpasses bottled	
Type of firm	IOFS	Count	15	13	28
		% within firm type	53.6%	46.4%	100%
	COOPERATIVES	Count	0	31	31
		% within firm type	.0%	100.0%	100%
Total	Count		15	44	59
	% within firm type		25.4%	74.6%	100%

Figure 30 Type of firms and main product



Phi and Cramer's V coefficients show the existence of association among variables at a confidence level of 100%. I.e. the IOFs spread their sales among bulk and bottled wine, while cooperatives trade with more bulk than bottled wine.

Table 32. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.614	.000
	Cramer's V	.614	.000
N of Valid Cases		59	

d) Type of firms and category of commercialized wine: table-quality

Commercialized table wine exceeds quality wine by 59.6%. Differentiating between firms, IOFs trade more quality wines and cooperatives more table wines. This conclusion is significant at a confidence level of 95%.

Table 33. Type of firm and wine category. Cross-tabulation.

			Wine category		Total
			Table wine does not exceed quality wine	Table wine exceeds quality wine	
Type of firm	IOFS	Count	15	11	26
		% within firm type	57.7%	42.3%	100.0%
	COOPERATIVES	Count	8	23	31
		% within firm type	25.8%	74.2%	100.0%
Total	Count		23	34	57
	% within firm type		40.4%	59.6%	100.0%

Figure 31 Type of firms and category of commercialized wine

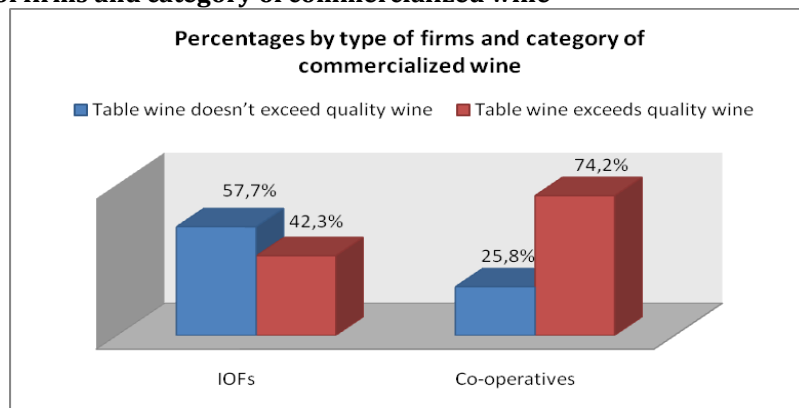


Table 34. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.324	.015
	Cramer's V	.324	.015
N of Valid Cases		57	

e) Type of firms and price.

The relation between type of firm and the sales price range of their products is that wine firms sell at a price below 5€/Liter, but particularly cooperatives (100%) versus IOFs (57%) maintain this behaviour with a significance level of 100%.

Table 35. Type of firm and Price. Cross-tabulation.

			Price		Total
			Until 5€/l	Over 5€/l	
Type of firm	IOFS	Count	16	12	28
		% within firm type	57.1%	42.9%	100.0%
	COOPERATIVES	Count	31	0	31
		% within firm type	100.0%	.0%	100.0%
Total	Count		47	12	59
	% within firm type		79.7%	20.3%	100.0%

Figure 32 Type of firms and prices

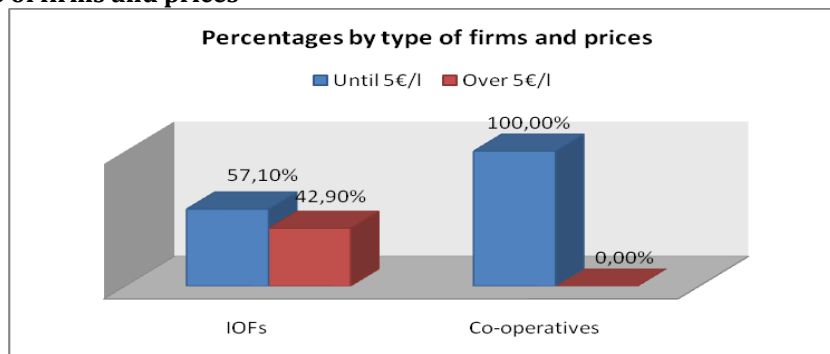


Table 36. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	-.532	.000
	Cramer's V	.532	.000
N of Valid Cases		59	

f) Type of firms and export performance

79% of IOFs export. So do a 61% of cooperatives. IOFs export more than cooperatives with a probability of 85% (Phi and Cramer's V).

Table 37. Type of firm and exports. Cross-tabulation.

			Exports		Total
			Does not export	Does export	
Type of firm	IOFS	Count	6	22	28
		% within firm type	21.4%	78.6%	100.0%
	COOPERATIVE	Count	12	19	31
		% within firm type	38.7%	61.3%	100.0%
Total		Count	18	41	59
		% within firm type	30.5%	69.5%	100.0%

Figure 33. Type of firms and exports

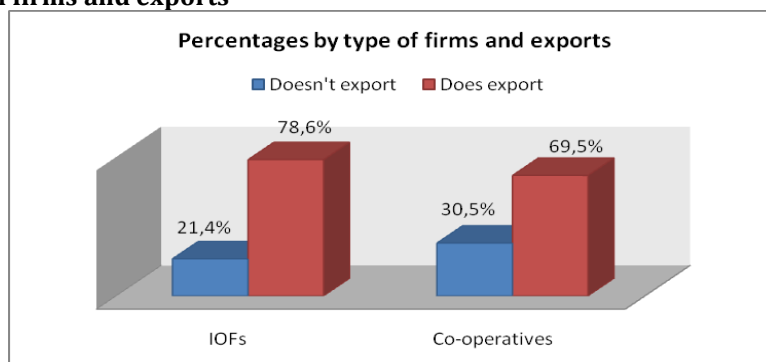


Table 38. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	-.187	.150
	Cramer's V	.187	.150
N of Valid Cases		59	

g) Type of firm and export destination

Europe, Asia and USA are considered as destinations. In this case, the sample is reduced by 30% because some surveyed firms did not answer. The results are:

Destination Europe: Exports to Europe are more tied to cooperatives.

Table 39. Type of firm and exports to Europe. Cross-tabulation.

			Europe		Total
			Does export	not export	Does not export
Type of firm	IOFS	Count	5	16	21
		% within firm type	23.8%	76.2%	100.0%
	COOPERATIVES	Count	0	20	20
		% within firm type	.0%	100.0%	100.0%
Total	Count		5	36	41
	% within firm type		12.2%	87.8%	100.0%

Table 40. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.364	.020
	V de Cramer	.364	.020
N of Valid Cases		41	

Destination Asia: Both IOFs and cooperatives export to Asia.

Table 41. Type of firm and exports to Asia. Cross-tabulation.

			Asia		Total
			Does export	not export	
Type of firm	IOFS	Count	11	10	21
		% within Asia	45.8%	58.8%	51.2%
	COOPERATIVES	Count	13	7	20
		% within Asia	54.2%	41.2%	48.8%
Total	Count		24	17	41
	% within Asia		100.0%	100.0%	100.0%

Table 42. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	-.128	.412
	Cramer's V	.128	.412
N of Valid Cases		41	

Destination USA: Exports to USA are more tied to IOFs than to cooperatives.

Table 43. Type of firm and exports to USA. Cross-tabulation.

			USA		Total
			Does export	Does not export	
Type of firm	IOFS	Count	15	6	21
		% within USA	45.5%	75.0%	51.2%
	COOPERATIVES	Count	18	2	20
		% within USA	54.5%	25.0%	48.8%
Total		Count	33	8	41
		% within USA	100.0%	100.0%	100.0%

Table 44. Symmetric Measures

		Value	Approx. Sig.
Nominal by Nominal	Phi	.234	.134
	Cramer's V	.234	.134
N of Valid Cases		41	

Appendix III – Methodological Aspects

Italy

Data reported in section 2 regarding the turnover of Veneto processing and bottling firms (table 4) derive from an estimation process. For this purpose, a balance sheets database on Italian cooperatives and companies (AIDA – Bureau Van Dijk) was used. From this database, a sample of 1,705 Italian wine manufacturers was extracted; this sample represents 72% of the entire Italian manufacturing wine. Methodologically speaking, the sample firms were divided by region of localization, in order to estimate the share of Veneto on the total Italian wine manufacturing turnover in 2008³², which comes out to be 27%. Applying this share to the Italian manufacturer turnover (table 1), sales of Veneto manufacturers of the wine sector has been estimated at 1.94 billions of Euros.

From the latter data, it was also possible to estimate the turnover trend of the Veneto wine manufacturers for the entire 2002-2009 period, thanks to the annual rate change registered in the same period on a sample of 92 manufacturers firms (taken from the above mentioned balance sheets database)³³ working in the Veneto wine industry³⁴. Considering 2008 as fixed base reference³⁵ table 45 shows the turnover trend over the years 2002-2009 and consequently the sales values for each year of the examined period, which come out from the application of change indexes to the estimated turnover for 2008 (i.e., 1.94 billions of Euros).

Table 45– Estimates on manufacturers (including cooperatives) wine turnover in Veneto, 2002-2009

	2002	2003	2004	2005	2006	2007	2008	2009
Turnover of wine manufacturers. Trend, Index 2008=100	77%	83%	83%	84%	88%	96%	100%	105%
Turnover of wine manufacturers (million Euros)	1,491	1,617	1,602	1,631	1,710	1,860	1,939	2,032

Source: estimates on AIDA – Bureau Van Dijk and Eurostat.

A similar methodological process was also adopted in order to estimate the turnover of Veneto wine cooperatives over the 2002-2009 period (table 6). In this case, the database of the Italian Agricultural Cooperation Observatory was used. From the 45 wine cooperatives based in Veneto (table 5), the turnover trend was estimated based on a sample of 36 cooperatives whose balance sheets and income statements were available

³² This estimate was carried out taking into account the 2008, because it is the latest available data on the Italian manufacturing turnover of the wine industry (on this data it has been applied the estimated share of Veneto – 27% – to know the wine manufacturing turnover in this region).

³³ From methodological point of view, for each sample's firms (92) there were used the balance sheets of every years of the period 2002-2009. The estimates were not extended to 2001 and 2000 because in that case it would be greatly reduced the sample size and especially its representativeness in terms of turnover (in these two years there was an important reduction of available balance sheets in the database used).

³⁴ This sample can be considered highly representative, given that these firms are worth 1.4 billion of Euros of the overall 1.9 billion estimated for the entire wine manufacturing turnover carried out in Veneto in 2008 (table 4).

³⁵ Indexes, 2008 = 100

for the entire series 2002-2009³⁶. Considering 2008 as fixed base reference, table 46 shows cooperatives' turnover over the 2002-2009 years and, consequently, the turnover values for each year of the examined period. The latter derives from the application of change indexes to the sales value known for 2008 (890 million Euros; table 5).

Table 46- Estimates on cooperatives wine turnover in Veneto, 2002-2009

	2002	2003	2004	2005	2006	2007	2008	2009
Turnover of wine cooperatives. Trend, Index 2008=100	83%	83%	88%	86%	89%	99%	100%	107%
Turnover of wine cooperatives (million Euros)	738	739	781	768	788	882	890	949

Source: estimates on AIDA – Bureau Van Dijk and Osservatorio sulla Cooperazione Agricola Italiana [Italian Agricultural Cooperation Observatory].

Spain

Estimates in table 14 have been carried out extending the percentage changes of the price indices of agricultural products, output: base 2000=100 (source: Eurostat). The only real value is that of year 2000.

Table 47- Percentage changes of Price indices of agricultural products, 2000-2008

	2000	2001	2002	2003	2004	2005	2006	2007	2008
Spain output: base 2000=100 (annual)	-6.9%	-31.4%	-2.0%	8.3%	-5.2%	-11.3%	-1.8%	12.5%	12.0%

Source: Eurostat.

The estimates in tables 15 and 16 have been made multiplying the real value of each variable by the Turnover Index from Eurostat. (Year 2008 in table 15 and year 2010 of turnover of CLM wine manufacturers in table 16)

Table 48- Turnover Index – Total, 2002-2009

	2002	2003	2004	2005	2006	2007	2008	2009	2010
Spain	88.74	91.23	96.63	99.92	109.50	118.61	111.27	83.63	89.09

Source: Eurostat

³⁶ The sample is very representative, considering that it is constituted by 36 out of the 45 Veneto wine co-operatives. This sample is worth 780 million Euros, compared to the 890 millions reached by all wine co-operatives working in this region.